

The NATION'S SCHOOLS

DEVOTED TO THE APPLICATION OF RESEARCH TO
THE BUILDING, EQUIPMENT AND ADMINISTRATION OF SCHOOLS

VOLUME VIII

AUGUST, 1931

NUMBER 2

How the Supervisory Conference Affects Teaching

Investigations conducted at the University of Michigan have led to the conclusion that the carefully planned individual conference has a demonstrable effect on classroom procedure

By GEORGE C. KYTE, Professor of Education, University of California

THE experiences of supervisory officers have led them to believe that the individual supervisory conference materially aids the teacher in improving her classroom procedure. The educational literature contains numerous articles recommending the use of this technique as an effective supervisory means and offers guidance in its use.

Research data regarding its effectiveness are so meager, however, that such general acceptance of it seems somewhat surprising. In order to obtain evidence regarding the results obtained by the use of individual supervisory conferences, I conducted the investigations and guided graduate students in carrying on the various phases of them reported in this article.¹

Superintendents, grade supervisors and principals of elementary schools provided me with more than fifty sets of stenographic records of classroom teaching and supervisory conferences which made the studies possible. Each set consisted of an observed recitation, the individual supervisory conference held with the teacher regarding it, and a subsequent, observed recitation occurring when the teacher had sufficient time to crystallize modifications in her teaching. In some

cases, stenographic recording of the entire performance was a new experience for both the supervisory officer and the teacher. In many others, it was a procedure that had been used more or less frequently.

In order to select a representative group of sets for intensive investigation, various data regarding the supervisory officers, the teachers, the recitations and the conferences were tabulated and analyzed. The ten specimen sets contained classroom recitations carried on in diverse grades below the seventh. The subjects taught included arithmetic, reading, spelling, language and history. Numerous phases of types of teaching procedure were also included. The skill with which the lessons were taught ranged from "lacking" to "remarkable." The training of the teachers ranged from one year beyond high school graduation to graduation from college. Their teaching experience ranged from less than two years to more than twenty years. All of the recitations in the selected sets of records occurred in the classrooms of graded schools. The ratings of the first teaching performance in a set indicated that the ten specimens ranged from very poor to very good recitations.

The sampling was done to provide conferences as representative as the recitations were of the

¹Acknowledgment is made of the assistance given the author by many supervisory officers, especially Lillian Lamoreaux, T. R. Hersh, H. L. Parker and D. A. van Buskirk.

entire group of stenographic records. Superintendents, grade supervisors and elementary school principals serving as supervisors were included among those sending in the ten sets selected. Their training in supervision ranged from "none" to "considerable." Their supervisory experience varied from a limited period of time to many years as supervisory officers. The supervisory conferences ranged from: (1) very short ones to very long ones; (2) a conference of two points to one of six points discussed; (3) a conference in which one point was stressed to one in which three points were stressed. When the supervisory conferences were rated independently of the stenographic records of teaching, those selected ranged from "weak" performances to "very strong" ones.

The combinations of recitations and conferences were selected to provide a range of samplings. For example, the two first recitations rated as poorest of the ten selected were followed by conferences that differed considerably in their assigned ratings. One conference was rated "weak" and the other "strong." The conferences occurring after each of the five "good" lessons ranged from "weak" to "very strong." Each type of supervisory officer was represented by at least one of the conferences falling in this middle group. The ten sets of records thus chosen as totally rep-

resentative of the entire group collected were those agreed upon by three raters—a superintendent of schools, a grade supervisor and myself.

The twenty recitations thus selected were assigned numbers that made them readily identifiable in the pairs to which they belonged but they were so numbered that only knowledge of the keys used made it possible for any rater to know with certainty that one lesson in a pair was taught by one teacher before the other lesson in the pair. Twenty copies of each lesson were mimeographed in order that 200 copies would be available for assembling in sets. The recitations constituting a pair were assembled so that ten copies of the first observed teaching appeared first and ten copies of the second observed teaching appeared first.

This arrangement was followed throughout in assembling the mimeographed materials and in firmly fastening together the two specimens in each pair. It ensured compensation for the order in which judges were exposed to the records. Ten judges, for example, would read Recitation 22,518 first and 22,394 second, but ten others would read 22,394 first and 22,518 second. No one of the twenty judges would be given information as to whether the teacher taught Lesson 22,518 first or second. Because of the short period of time elapsing between the two lessons, they dealt with the

TABLE I—JUDGMENTS OF FORTY SUPERVISORY OFFICERS WITH RESPECT TO THE SUPERIORITY OF ONE LESSON OVER THE OTHER IN EACH OF TEN PAIRS OF LESSONS

Number Assigned to Each Pair of Lessons	Subject of Each Pair of Lessons Taught	Grade in Which Lessons Were Taught	Order in Which Lessons Were Taught	Number of Judges Rating One Lesson as Better Than the Other of a Pair		
				Order in Which Judges Read the Stenographic Records		
				First	Second	Total
I	Auditorium	III	First	2	4	6
			Second	6	8	14
II	Arithmetic	III	First	..	1	1
			Second	9	10	19
III	Spelling	V	First	6	6	12
			Second	4	4	8
IV	Arithmetic	VI	First	2	3	5
			Second	7	8	15
V	History	VI	First
			Second	10	10	20
VI	Arithmetic	V	First	2	1	3
			Second	9	8	17
VII	Reading	I	First	1	3	4
			Second	7	9	16
VIII	Arithmetic	VI	First	..	1	1
			Second	9	10	19
IX	Arithmetic	IV	First	7	4	11
			Second	6	3	9
X	Spelling	III	First	1	3	4
			Second	7	9	16
TOTALS:				21	26	47
				74	79	153

same subject matter. In fact the interval between the first recorded lesson and the second one was less than one month in each instance.

The 200 copies of pairs of related recitations were divided into forty sets of five each, an effort having been made to rotate and group the specimens so that they would (1) be representative of the various subjects, methods, grades and ratings of performance occurring in the ten sampled specimens; (2) vary in the order of exposure to the recitations in a pair when read by the judges; (3) be distributive with respect to the order of exposure to five pairs in a set and with not more than three first exposures to first recitations, or three first exposures to second recitations, and (4) be assembled with the five pairs in a set occurring in randomly arranged sequence.

An instruction and report sheet was prepared, mimeographed and then attached to each set of five pairs of recitations. In spaces provided on the blank, a judge was to write his name and the supervisory position he held. The instructions to him read: "Circle on this sheet the number of the recitation which you consider the superior one of the two paired together. State briefly your reasons for judging the one recitation as better than the other."

Over the narrow left-hand column of the report form appeared the heading, "Number assigned each recitation," and in the spaces under it were written in for the judge all the numbers of the paired specimens. The numbers corresponded to the order in which the pairs were arranged for him and the order in which each lesson occurred in each pair. The following example illustrates the order occurring in the chance arrangement of the five pairs constituting one of the forty sets: (I) 47,123, 47,287; (II) 28,632, 28,012; (III) 56,356, 56,685; (IV) 95,138, 95,893, and (V) 71,760, 71,830. Over the wide right-hand column of the report sheet appeared the heading, "Reasons for considering one specimen better than the other."

What Judges Were Told to Do

The oral instructions given the judges who were to rate the specimens included a statement that each pair constituted stenographic records of recitations taught by one teacher a short time apart. They were told also that the order in which the recitation occurred in each pair was a chance arrangement in which half of the cases in the entire group presented an order in which the first recitation appeared first and in the other half, the second recitation appeared first. In addition, the judges were informed that the group of specimens in a set of five represented the chance arrange-

ment previously described in this report. Nothing was said about a supervisory conference having occurred between the first and second recitations in each instance.

The judges chosen to rate the specimens and to state their reasons for designating one specimen in a pair as better than the other were enrolled in either one of two sections of my class in the super-

TABLE II—DISTRIBUTION OF THIRTY-SEVEN POINTS OCCURRING IN TEN SUPERVISORY CONFERENCES AND EXTENT TO WHICH THEY WERE NOTED AS AFFECTING TEACHING

<i>Order in Which Items Occurred in the Conferences</i>	<i>Number of Items Noted as Affecting Teaching</i>	<i>Number of Items Not Affecting Teaching</i>
First item mentioned.....	8	2
Second item mentioned...	9	1
Third item mentioned....	9	..
Fourth item mentioned...	4	1
Fifth item mentioned....	1	1
Sixth item mentioned....	1	..
First item stressed.....	10	..
Second item stressed.....	8	1
Third item stressed.....	4	..
Number of items mentioned	32	5
Number of items stressed..	22	1

vision of elementary school instruction offered in the 1930 summer session at the University of Michigan. They were selected from the group of more than seventy persons because they were graduate students who were candidates for or had completed the requirements for the Master's degree. Almost all of the forty judges had been previously employed in supervisory positions and were returning to them or to similar ones after the close of the summer session. When they undertook the evaluation of the specimens, they had just completed three-fourths of the course in supervision of elementary education. Their study had included such topics as supervisory duties of the various school officers, planning for supervision, supervisory observation of teaching, the individual supervisory conference and critical evaluation of recitations and constructive supervisory planning for helping teachers to improve in similar situations.

The 40 judges included 15 superintendents of schools, 8 elementary school principals, 4 high school principals, 3 grade supervisors, 3 directors of county normal schools, 2 critic teachers, 1 director of a department in a teachers' college and 4 successful teachers preparing for supervisory positions. One teacher was to begin her work as an elementary school principal when the

schools opened in September and one elementary school principal was to begin work as a grade supervisor.

In Table I are indicated the various subjects taught in the specimens selected for evaluation by the judges and the grades in which the lessons occurred. The teacher who conducted the recitations in auditorium lessons, the specimens in Pair I, was teaching the children through dramatization. The recitations were primarily language lessons and memorization growing out of reading lessons. The table indicates also the distribution of the ratings of twenty judges regarding each specimen pair.

The distributions in the table indicate that the order in which the judges were exposed to the stenographic recitations had practically no effect on their final judgment as to the superiority of one recitation in a pair over the other. The marked similarity of scores for first exposures with the scores for second exposures in each of the pairs except No. IX is conclusive. It is probable that the difference in the one case is due to the fact that both specimens in the pair represented such slight differences in merit as to cause the variation in the judgments. The two lessons constituted the two poorest teaching performances in the twenty selected recitations. The opinions of the judges contained statements indicating that they had difficulty evaluating the two poor lessons.

An examination of the distributions of ratings discloses that in every case marked agreement occurs between the evaluation of recitations in a pair as determined by ten judges who were exposed to the first recitation first and the evaluations of ten other judges who were exposed to the first recitation second. Practically all of the slight differences can be accounted for by the ability of the judges to evaluate the specimens and the bases on which they rendered their judgments. Consequently the combined scores of twenty judges offer reliable indexes of relative scores of specimens.

The Effects of Supervisory Conferences

The totals of the judgments show that in eight out of ten pairs, the second recitation taught, which occurred after the supervisory conference, is clearly superior to the first, which preceded it. The distribution of judgments in Specimen IX indicates that the difference in merit between the two lessons is so slight that the judges could not agree as to which recitation was the better. The judgments in the case of Specimen III seem to indicate that the first recitation is slightly better than the second one. From the data in the table only one conclusion can be drawn—a recitation that has been taught after a supervisory confer-

ence has been held with a teacher will probably be superior to the recitation which the teacher previously taught and which was discussed with her in the supervisory conference.

In order to determine the specific nature of the immediate effects of the supervisory conference on the lesson subsequently taught by the teacher, the topics discussed in the conferences were tabulated in various ways and the opinions of the judges on the recitations were analyzed and tabulated.

The opinions of two judges who agreed as to the merits of one recitation as compared with its corresponding member in a pair will illustrate the nature of the statement of reasons written by the forty judges in carefully evaluating each lesson. A grade supervisor stated that Lesson 22,394 was better than Lesson 22,518 for the following reasons: (1) provided for individual differences; (2) adopted child life situations to activity; (3) results more satisfactory than other lesson; (4) determined that problem was understood by all. The reasons advanced by an elementary school principal were: (1) uses problems that will be usable later in life; (2) her instruction is more individualized; (3) encouraged rapid workers and insisted upon accuracy. The illustrations indicate the ease with which the reasons could be tabulated.

Developing Good Study Habits

How readily the points included in a supervisory conference were identified with the corresponding points found in the tabulated reactions is to be seen in the following quotations from the two sources of data. In the conference regarding the first lesson of Pair X, the superintendent said to the teacher: "I think that your trouble . . . is that the children have no definite methods of studying their words. They haven't good study habits." Then followed a discussion in which stress was placed upon the methods of studying to be taught to the children and the work of the teacher in developing this skill. Fourteen of the sixteen judges who rated the second lesson as superior to the first included reasons which disclosed that the conference had been a source of constructive help to the teacher in at least this one point. The specific opinions of the supervisory officers regarding this improvement noted in teaching are as follows: "She taught proper study habits in spelling." (Elementary school principal.) "The teacher emphasized good study habits." (Elementary school principal.) "Gave needed explanation before study. Help in needed drills in writing and word meaning." (Superintendent.) "Better methods of studying words." (Elementary school principal.) "Study habits were developed." (Grade supervisor.) "Good spelling habits." (Superin-

tendent.) "Had children observe good spelling and writing habits." (County normal school director.) "Modern methods of teaching spelling." (Elementary school principal.) "Word study precedes written lesson." (Elementary school principal.) "Directions well given; words explained well." (Superintendent.) "Meanings associated with words in study." (Superintendent.) "Needed explanation given before study." (Elementary

problems written on the board beforehand was a fine time-saver." Since the teachers would continue to follow these approved practices, the judges could not be expected to mention them among their opinions on the recitations in which the practices occurred. The fifth point of six mentioned in one conference consisted of advice to the teacher to eliminate the use of "markers" by the first grade children in their reading. The steno-

TABLE III—REASONS STATED MOST FREQUENTLY BY JUDGES WHO RATED SECOND LESSON AS BETTER THAN FIRST, THE REASONS CORRESPONDING WITH POINTS OCCURRING IN THE SUPERVISORY CONFERENCE¹

Number Assigned to Each Pair of Lessons	Judges Rating the Second Lesson as Better Than the First		Distribution of the Three Most Frequently Mentioned Reasons for Rating the Second Lesson as Better than First					
			Point 1 ²		Point 2 ²		Point 3 ³	
	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent
I	14	70	13	93	0 ³	0 ³	0 ⁴	0 ⁴
II	19	95	18	95	17	89	10	53
III	8	40	8	100	7	88	5 ³	63 ³
IV	15	75	11	73	10	67	9	60
V	20	100	19	95	13	65	8 ³	40 ³
VI	17	85	15	88	10 ³	59 ³	6 ³	35 ³
VII	16	80	14	88	10	63	3 ³	19 ³
VIII	19	95	15	79	15	79	14	74
IX	9	45	9 ³	100 ³	5	56	5 ³	56 ³
X	16	80	14	88	9 ³	56 ³	9 ³	56 ³

¹This table should be read as follows: With respect to Pair I, 14 judges, or 70 per cent of the group, rated the second lesson taught as better than the first; 13, or 93 per cent of the 14, mentioned Point 1 as a reason for so rating it; none, or 0 per cent of the 14 judges, mentioned Point 2 as a reason; etc.

²The three points are arranged in the order of frequency of mention, Point 1 occurring most frequently.

³Point not given much stress in the supervisory conference.

⁴Only two points were discussed in the supervisory conference.

school principal.) "More definite explanation." (County normal school director.) "More checking of errors and more remedial work." (Superintendent.)

By critically analyzing the contents of these ten representative supervisory conferences, I found thirty-seven points discussed, of which twenty-three points were given considerable stress. The order in which the items occurred in each conference was noted also. Each point was studied in relation to the reactions of the judges to the recitations. Table II discloses the extent to which the thirty-seven points were found to be affecting subsequent teaching as noted in the stenographic record of a lesson which followed a supervisory conference. Only five points were not listed by the judges.

Of the five items not noted by the judges as affecting the work in the second recitation, two were statements of approval introduced by the supervisory officers in opening their respective conferences with the teachers. "Your related word study before the reading lesson was good." "Having the

graphic records of the reading lessons contain no items that would lead the judges to know that such a practice had occurred in either recitation. Hence, only two of the points need to be accounted for by critical study of all the materials which might have a bearing on them.

In a supervisory conference devoted almost wholly to one point, passing mention is given to a second point, "How do you correlate this work with other subjects?" The teacher vigorously states that correlation is difficult to include in such lessons and the supervisor fails to follow up her lead. A careful study of the lesson following the conference, compared with the recitation preceding the conference, was made by three investigators independently of each other. I was one of these three persons. None of us could find any trace of influence of the point given only passing mention to the teacher by the supervisor. This omission could well have been expected because of the way it was mentioned in the supervisory conference.

The fifth point is a more difficult one to treat

because it was the second of two points stressed in the conference and the third of four points discussed. A superintendent advised a teacher to insist upon 100 per cent accuracy in spelling and discussed this topic with her at some length. The efforts of five persons to discover any item in the second recitation that could be construed as being an application of the point in the classwork yielded no evidence. A letter sent to the superintendent long after the stenographic record had been made brought a response from him to the effect that, although he could not be positive, he thought he remembered noticing from the children's papers that the teacher had followed the suggestion.

How Teaching Was Affected

From the data in Table II and the discussion of the five points, we are led to conclude that all topics discussed in the supervisory conference which would affect the classroom work in observable ways did affect teaching in each case studied. We can draw a second conclusion, therefore, as a result of these findings. The points mentioned in a supervisory conference regarding an observed lesson, especially the points stressed by the supervisory officer, will produce observable effects on the classwork of the teacher shortly after the conference has been held with her.

An assembling of the data as they appear in Table III provides another distinct approach to the study of the materials. The number of points mentioned in each supervisory conference and the number of points stressed were so distributed in the ten specimens that an analysis of the influence of 3 points in each case except one would indicate more than satisfactorily the influence of the conference on the later classwork of the teacher. With the exception of Case I, 3 or more points were discussed in each conference, the average number being 3.7 points. In every conference, except Cases I and IX, 2 or 3 points were stressed. The average number stressed was 2.3 and the mode, 3 points.

Since the tabular organization accounted for 29 of the 32 mentioned points noted by the judges and 19 of the 22 stressed points noted by them, the data present a complete picture of the specific influence of each conference on the classwork of the teacher.

In 9 of the 10 cases, the point most noticeably affecting subsequently observed classwork was one that had been given marked stress in the conference. An inspection of the material disclosed that in 8 cases, it was the first point stressed and in 6 cases the first point discussed in each conference. Seven of the ten next most noticeable points were those given considerable stress in the supervisory conference.

The distributions of the judges' three most frequently mentioned reasons for rating the second lesson better than the first, corresponding to three points occurring in the conference regarding the first lesson, present several significant findings. The most obvious inference is that a point stressed in a supervisory conference, especially the first one, materially influences the work of the teacher. Three points discussed in a conference also materially affect the teacher's classwork, markedly stressed points producing more observable effects than those treated lightly. Hence, points discussed in a supervisory conference, especially the ones stressed, produce immediate effects on the observed teaching that occurs shortly after the conference.

From the data in Tables I and III, especially, it is possible to evaluate the conferences according to their effectiveness. The reader will see that Conferences II, V, and VIII were markedly effective. Conferences I, VI, VII and X produced effects that can be designated as considerable. Conference IV was moderately effective and Conferences III and IX were only slightly effective. The assigned values, together with the amassed data included in this article, lead to one generalization: The carefully planned individual supervisory conference produces demonstrable effects on classroom procedure.

Keeping Pace With the Changing Conditions of the Present

That the present age is probably more complex and swiftly changing than any age in history, is the opinion of F. H. Bair, superintendent of schools, Shaker Heights, Ohio.

"Education is handicapped, preyed upon by propagandist pressure groups and submerged in its own crop of half-educated materialists," he contends. "Worst of all, it is probably 90 per cent conservative in its spirit and control."

"In so critical a time we should be justified in throwing overboard everything else and applying all the intelligence we have to the world we live in. From the first grade up, the schools ought to offer reservoirs of information through working libraries; they should constitute themselves debating societies and town meetings on contemporary controversial problems; they should introduce science from the kindergarten in the hope of encouraging a habit of mind fitter to deal with the social problems; and they should introduce French and German for the ablest children in early childhood."

Guidance in the Small High School

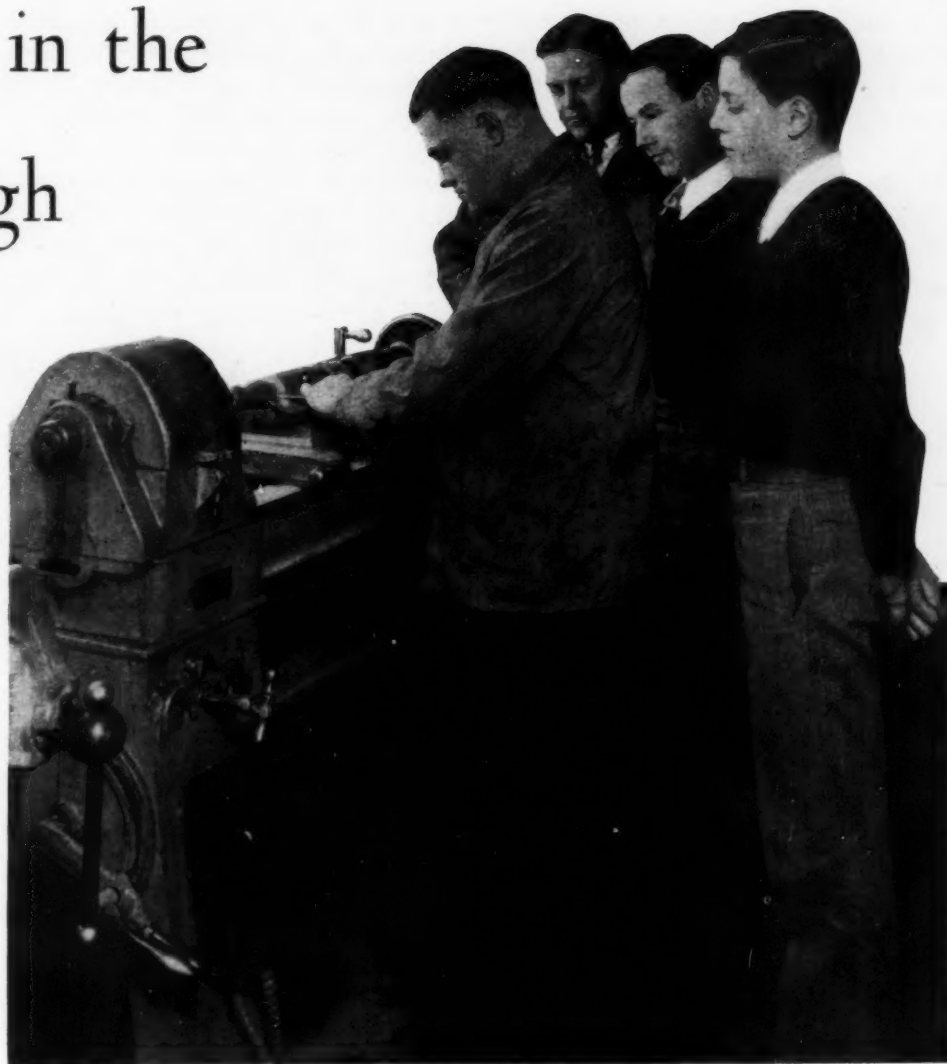
By

THEODORE KAMBOUR

Principal,

Montpelier High School,

Montpelier, Vt.



The plan in use in Montpelier, Vt., is one that could well be emulated by schools that have heretofore felt they could not afford counselors for their pupils

IN THE modern high school the principal regards the proper selection of courses by the pupils as one of his most important problems. The tendency to provide pupils of the lower levels of mental ability with educational opportunities within their grasp is a significant feature of modern education.

The principals of many small high schools are keenly aware of the seriousness of the problem, but they are so burdened with their duties, as are their teachers, that they are reluctant to build up a guidance system that will necessarily mean additional work. This is particularly true in towns and small cities in which there is little chance of adding to the teaching force because of the unwillingness of school committees to lay further expense upon the taxpayer without tangible proof

that such an expenditure of funds is worth while.

It is apparent that two things are of fundamental importance in an effective guidance program: (1) capable, conscientious counselors and (2) a sufficient number of varied subjects offered by the school to meet the needs of the pupils of different levels of ability.

In Montpelier, Vt., the problem of finding efficient counselors under such difficulties as those described was solved by a method obviously practical in the great majority of small high schools. The faculty included some teachers of high professional caliber who were interested in guidance and consequently were willing to make a sacrifice of time and effort in order to promote a guidance program. They were more ready and able to undertake the work when they were offered relief

from the monitorship of assembly music. The other members of the faculty were interested to such a degree that they were willing to share the extra work made necessary by this relief. If such relief is impossible in other schools, release from another type of routine duty, such as recess supervision or study room supervision, is perhaps possible. If the guidance program proves practical and valuable, superintendents and school committees may be more successfully persuaded to increase the faculty to relieve the counselors and make it possible for them to undertake further guidance work. Not much relief is required for such purposes in a high school of 300 pupils. If two teachers were relieved from one class a day, ample time provision would be made for a guidance system.

The problem of providing courses for at least three levels of scholastic ability may be difficult in high schools whose enrollments are as low as 150 pupils. This should be much easier in schools whose enrollments are in excess of 300. It is as difficult to add subjects to the program as it is to procure additions to the teaching staff, since new subjects usually necessitate more teachers. It is generally true, however, that most schools that now have little or no guidance can use their present program to better advantage. In some instances, new subjects may be offered without any increase of the curriculum, by combining several of the older subjects.

Modifying the Curriculum

Next year the Montpelier High School curriculum is to be modified by combining medieval history and modern European history into one course, European history. These two units were originally intended for college preparatory pupils. In practice, few such pupils take either, although more pupils, and especially those of a higher scholastic ability, have elected the modern history. A combination of the histories will afford the opportunity to add to the curriculum a subject for pupils of low scholastic ability, without increasing the faculty load, whereas the school will still offer approximately the same content of European history. The subject most needed is a social history, a story of man's progress, offered to sophomores. In order to gain such ends, other small schools have combined junior and senior Latin, or even junior and senior English units, or have offered college preparatory physics and chemistry in alternate years.

Even when all such recourses are taken advantage of, the problem of providing subjects, and especially divisions for even two levels of scholastic ability, may be difficult in high schools whose

enrollments are as low as 250 pupils. In such smaller schools there are, indeed, rarely enough seniors to warrant even two English divisions, although two or three divisions may be necessary for freshman English. This condition might be altered in many small schools if guidance were more thoroughly organized, and if the modern theory of offering secondary educational opportunities to pupils of all ability levels were more efficiently practiced.

Another Avenue of Usefulness for Counselors

Many schools of enrollments of 150 too frequently have class sizes of: freshmen, 55; sophomores, 45; juniors, 30; seniors, 20. After one week of school in September, 1930, the class rolls in Montpelier were 99, 84, 80 and 69. The faculty is not satisfied with such mortality as these figures show and expects further use and development of a guidance program to effect an improvement.

In most high schools, guidance may be started by using the curricula schemes now in operation. It is generally true that most such schools offer at least three curricula: college preparatory, commercial and general. These offer sufficient range with which to begin guidance, especially if the general curriculum includes several subjects not elected by college preparatory pupils, since the majority of better pupils elect the college entrance curriculum and the remaining pupils of above average ability usually elect the so-called commercial curriculum, which really trains for secretarial and bookkeeping positions.

It is apparent that such a condition may not take adequate care of the capable pupils who do not care for training in secretarial duties, and whose circumstances do not allow any serious contemplation of college entrance. In small schools, these pupils usually are few so that, unless there is a wider curriculum than the minimum here suggested, it is ordinarily necessary to guide these pupils into subjects and units that will be of most benefit to them. They would, therefore, probably graduate from a general curriculum, but from a general curriculum that differed widely in subjects and units from that from which the pupil of low ability would graduate. The recent development in many schools of home economics and agricultural curricula, under Federal aid, has done much to solve such guidance problems.

The problem, therefore, becomes one of placing the pupils of low ability in the general curriculum and so administering the teaching that these pupils can successfully pass the work. Experience in Montpelier has shown that these pupils are most interested and do their best work in the following

subjects: manual training, home economics, general science, commercial arithmetic and business practice, social science, practical chemistry (non-college entrance) and problems of American democracy.

In Montpelier, the enrollment is approximately 340 pupils. The following curricula are offered: college preparatory, commercial, home economics and general. We plan to place our poorest pupils in the general course and advise them to take the following programs: freshman year—English, general science, social science and manual training or home economics; sophomore year—English, social history or biology, commercial arithmetic and business practice and shop work or home economics; in the junior and senior years—English, a science (practical chemistry or biology), a unit in social science and home economics or shop work.

To meet individual differences to some degree in the junior and senior years, pupils are encouraged to elect other units offered in classes below

This senior is consulting his principal in regard to the career he will follow when he has finished high school.



their official class rating. Success is then likely to be achieved because of growth in mental age and the development of a more ambitious spirit and of aggressiveness. Thus a pupil who would encounter difficulty in a given subject as a sophomore may find it comparatively easy as a junior or senior.

How Guidance System Functions

A brief description of how the guidance system in Montpelier is run may be of interest. Each counselor is assigned one of the following groups: juniors and seniors; sophomores; freshmen girls; freshmen boys. These groups vary from about fifty, for each of the freshmen groups, to about 140 for the junior-senior group. This may seem to bring about unbalanced loads. The seniors as a group, however, present far fewer guidance problems. Almost all have already decided whether they are to go to college or what they intend to do following graduation. The few re-

maining senior problems of this nature are handled in the principal's office. The juniors offer fewer guidance problems than the sophomores. The freshman problems, of course, demand far greater study than those of any other class. For these reasons, it is felt that such a division of the work is justified. The counselors have confirmed this opinion after experience with the groups of these sizes.

The Counselor's Duties

As early as February, the counselors begin to meet the pupils in their groups to plan the list of subjects each pupil is to study the next school year. In preparation for these conferences, the

counselors make a study of the guidance problems presented by each individual in the group. This includes a detailed study of all phases of the school records of each pupil. These records include intelligence quotients, data covering any standard tests taken, as well as school marks and other information that usually appears on pupil record cards. In cases offering unusual difficulty, a further study is made along the lines suggested in the "Guidance Report."

The elections of subjects are recorded on cards such as are used in many schools. These are filled out and passed into the office in April or early May in order to allow an early start on the construction of the daily program and teaching schedule—the "chore" of the year in most high schools. This early start is found necessary because of the time required to build a program in which pupils are placed in divisions according to scholastic aptitude.

At the close of the school year, the counselors



A valuable phase of the counselor system is the after school meeting when even the youngest pupils can discuss with the counselor college entrance requirements and allied subjects.

make such modifications in the pupils' plans as may be made necessary because of failures in studies that have occurred during the current school year.

Even well considered programs sometimes need further adjustment since no "try out" courses are offered. For this reason, the first four weeks of school in September are regarded as a trial period. At the end of that time, pupil failures are reported to the counselors and are studied by them with a view to changing some of the subjects chosen for the following year, if desirable. The number of such changes has decreased as the system has matured. A rule that no changes may occur after the four weeks' period has been found to be salutary, although exceptions are made in unusual cases.

Guiding Freshmen

The elementary school principal and the eighth grade teachers, in cooperation with the high school principal, act as counselors for the incoming freshmen. These teachers have shown great interest in the work and have greatly aided the guidance program. They are provided with bulletins outlining the guidance policies herein described. Of course, such bulletins are also provided for the high school counselors, who find them of great benefit in their work.

The success of the plan has exceeded the fondest hopes of the faculty. It is partially evidenced

in the smaller percentage of failures recorded at the close of several school years. The percentage of failures in 1925-26 was 19; in 1926-27, 16; in 1927-28, 10 and in 1928-29, 5.6. Guidance has played the most important rôle in effecting such a marked reduction in failures. A careful study of the distribution of teachers' grades has also been a contributing factor in reducing the percentage of failures.

How Plan Has Succeeded

Are we maintaining standards? Yes and no. Yes, because standards are usually determined for a high school by its excellent pupils, particularly the college students. A study of records covering the last three years shows that Montpelier High School graduates have made excellent records at college, and that no such graduate has been dropped by any college. A number have won honors, in fact, a larger proportion than could have reasonably been expected. No, because we are not maintaining standards since we are not failing large numbers of high school pupils who lack the ability to meet older standards in the traditional high school subjects. A high school diploma, especially from a general course, does not mean as much as it did ten or twenty years ago. It cannot, and it should not, if the new conception of secondary education is to prevail, namely, provision for a high school education within the grasp of every pupil.

"Divided Houses" That Endanger Public Education

Why any friction between the business and professional functions of education must be avoided is discussed here in the light of the unfortunate separation of school and governmental administration

By WILLIAM JOHN COOPER, United States Commissioner of Education

"A HOUSE divided against itself cannot stand."

This scriptural injunction is known and quoted largely due to the telling effect with which Lincoln used it in deploring our unhappy disputes in the decade of the 1850's. But it is especially pertinent to some conditions in which school administrators find themselves to-day. The first of the more serious of these situations is the unfortunate separation of school administration from all other phases of governmental administration.

It will be recalled that colonial assemblies gave education only legislative consideration. All administrative authority was vested in local committees. The first state constitutions adopted were either silent on education or made quite general statements of a purpose on the part of the state to promote learning. The Federal Constitutional Convention of 1787 failed to state a policy with regard to education. During the first half century of our national existence, however, it became apparent to leaders in both national and state governments that democratic governments without an educated citizenship were doomed to fail, and all the early presidents of the republic stressed the subject in messages to congress, in public addresses and even in private letters. Congress, after 1800, endeavored by grants of public land to encourage the states to develop public school systems.

How the State Unit Began

George Clinton, great governor of New York's early statehood, was an earnest advocate of a school system. Under his guidance this state had provided in 1784 a board of regents to reorganize and govern King's College, and in 1787 gave this board power to charter and govern academies and colleges. In 1812 this state created the office of state superintendent of schools.

In those early days, however, there was no subject called "political science" in our colleges and accordingly no professors in that field. Governmental machinery was created as the need was felt. By 1837, Massachusetts had become convinced of the need of a state school administrative unit. Its legislature provided for a state board of education which, when established, selected Horace Mann, one of the pioneers in the public school movement, as its secretary. Thus was created a new state administrative unit. To-day every state has such a unit, but these units vary greatly in power, in functions and consequently in organization and effectiveness.

Changes in School Financing

About the same time are found the beginnings of the county superintendency and of the city superintendency. But in no case was especial thought given to the relationship of these new school officers to the other administrative officials in their respective units of government. All of these school executive positions were created and had become quite well developed before political science was recognized as a formal study concerned with the art and science of government. In its early beginnings too state school officers were primarily promoters of interest in education and, like other state administrative officials, were engaged largely in clerical and other routine duties. Hence, little need for special preparation was felt and no real need for unity in state government was apparent.

The second "divided house" situation is found in the field of public finance. The early educational demands on state revenues came from institutions engaged in the preparation of teachers and in collegiate education. Normal schools, state universities and land grant colleges were financed through the state unit of government and administered under boards whose members were ap-

pointed generally by the governor. Funds from Federal and other sources available for public schools were usually administered by ex officio boards whose members were responsible primarily for other services.

Within the last few years the changing character of wealth and the urbanization of our people have made it seem necessary to call upon the state for funds to support local schools. In every recent legislature in many of the states bills have been introduced to provide special forms of taxation for school support or to provide from the general fund a school equalization fund, or other bills affecting the financing of schools. Accordingly, we have now become aware of a "divided house" situation in the field of finance. Many learn for the first time that professors of public finance and other experts in general taxation have given little thought to the financing of schools, while professors of school finance on the other hand give consideration to the fiscal needs of education almost entirely apart from the requirements of other governmental functions.

Programs for the reorganization of state governments are calling attention to the danger of this separation. Several states now provide for an executive budget. This gives the governor increased powers with regard to allotting the state's finances and makes it important for a governor to give more attention to the needs of education. There are indications that the next step after establishing the executive budget will be the formation of a cabinet form of state government. This movement raises the question of the place of the chief school executive in the governor's council. It may mean that this officer will become an appointee of the governor. The slogan, "Keep the schools out of politics," which has played its part in the divorce of educational matters from other governmental functions may now work to the development of the schools.

Fiscal Independence "a Live Issue"

It would appear that in fiscal and administrative organization state governments must cease to be "divided houses." Accordingly, it has been only recently that the complete separation of school officials from the other state officers has been noticed. At the state level of government the present issue has developed largely for two reasons: First, the changing character of wealth and the urbanization of the population have made state funds for the support of local schools a vital problem in every state; second, the tendency to hold the governor rather than the legislature responsible for state affairs has led to placing more power in the governor's hands.

Somewhat similar situations are to be found on the county and city levels of government. The county school superintendent has become primarily an administrative and clerical official with minor fiscal responsibilities. Few professional demands are made of him by the schools, and in general he is not consulted in the formation of county governmental policies. The superintendent of city schools has, however, become an influential factor in the city life, formulating school policies, setting up professional standards and serving as administrative head of an organization which spends from one-third to one-half of the total local public income. As a result of the increasing needs of schools, fiscal independence of local school boards is becoming a "live issue" in some states. Shall we have another "divided house" at the level of city government?

The Ideal Business Manager

To obtain basic facts for solving such problems, two national surveys have been suggested—one an investigation of the administration of school systems, state and local, the other a study of school finance. The latter, already authorized by Congress, was started July 1. We hope that a study of the data gathered will point the way to end the chaos existing in this field and will lead to state legislation that should place the financing of education on a sound basis. If these results are profitable the Federal office may undertake a survey of the administration of schools at a later date.

The school business manager is interested in all such matters since, in many instances, he is a second officer or mate in the administrative machinery of his own school system and is in fact its chief fiscal officer. By a careful study of his work he can do much to prevent another "divided house"—one that may have serious consequences for education, namely, a separation of the business and professional functions. In some cities an effort is being made to distinguish the interests of the classroom teachers from those of the officers of administration. Should such an unfortunate notion split the administrative organization, school officials will find themselves powerless in facing other governmental agencies that demand larger shares of public income or else they will become members of a cabal of selfish interests. Children, the proper center of interest for all concerned with education, will then be overlooked.

We shall assume, then, at the outset that school business managers consider themselves integral parts of the respective administrations in which they work; that they recognize that these school administrations to be effective must have but a

single head; that they also endorse the principle that the schools exist for the sake of the children primarily, and that accordingly the chief professional officer should be the administrative superior of all the other members of the staff; that they are anxious so to master the work of their own positions and make themselves so efficient in the discharge of the business functions of school administration that the professional superintendent will have absolute confidence in their competence and in their integrity.

What sort of man is the ideal business manager of a city school system? First, he should be an educated man; second, he should have an educational point of view; third, he should have special training for his position; fourth, he should be alert to progressive movements in the business world; fifth, he should possess a sense of proportion; sixth, he should be a first-class diplomat.

Briefly, let me analyze what I mean by these qualifications. I mentioned first that the business manager should be an educated man. Five years ago, A. L. Heer made a study of the business executives in the public school systems in American cities having a population of 25,000 or more. In his dissertation, Doctor Heer summarizes his findings in these words:

"The median number of years of schooling beyond the elementary school, which these specialists have undergone, is five. Approximately one executive in three has spent four years in college. Few of them have taken special courses in college or university—courses that are calculated better to qualify them to perform the functions of school business executives.

"The most prolific source of supply for such executives is the school system itself; thus, teachers, principals and school clerks are frequently made business executives. Accountants and building contractors are also frequently given the positions in question."¹

College Men in Demand

For many years some of our most successful industrial corporations have been employing only college trained men in their executive offices. Recently a former pupil of mine told me he handled certain personnel relationships for one of our great chain store organizations. I was surprised to learn from him that college men were sought in their work. How much more then should we insist that the man who is to be a colleague of highly educated superintendents and a superior in rank and salary of principals and teachers who are college graduates, should himself be an educated man.

I suggested that in the second place the chief

business executive should have an educational point of view. Professor Reeder of Ohio State University said that: "Just as many superintendents of schools are deficient in their knowledge of business, so many school business executives are deficient in their knowledge of education; too many of the latter know too little of the aims of education and the means of realizing those aims. Moreover, too many think that business administration exists only for itself and that its fundamental purpose is to keep down expenses. A school business executive who does not have the educational point of view often becomes a positive handicap in carrying out an educational program; he often sees only materials and machinery and cannot envisage efficient citizens in the making."²

Special Training an Essential

This observation is applicable especially to larger cities where the volume of business to be transacted makes plausible the argument, "Put a business man in." A note of warning was sounded by Fred M. Hunter at the Boston meeting of the Department of Superintendence. "Business and financial interests of a city," said Doctor Hunter, "are always concerned with school patronage. Their main purpose is to conduct their respective business for a profit. This is natural and laudable. Sometimes, however, they intrigue to influence school expenditures unduly and to control school moneys. This invariably results in waste and extravagance, and the children of all schools 'pay the bill.'"³

Another reason for insisting that the business department be educationally minded is given by the Englehardts. They write: "Every change, whether it be in methods of teaching, the classifications of pupils or the size of class to be taught, will have a direct bearing upon the business management of the system. The business office must be constantly on the alert, every administrative device and practice must demonstrate its value in terms of the services rendered."⁴

The ideal business manager then will have framed in his mind, if not over his desk, a principle well stated by Dr. Thomas E. Finegan when making a report to the Department of Superintendence in 1926. "The purpose for which a school system is maintained," said Doctor Finegan, "the great objectives in education, the educational needs of a community, the accomplishments of the schools, these are the factors and elements that should dominate the final decisions pertaining to education. The emphasis should be placed upon education and its professional administration and not upon the financial and business aspects of administration."⁵

I suggested that in the third place the chief business executive of a school system should be especially trained for the work he is to do. In a paper read before the Pennsylvania State Association of School Board Secretaries in 1926, Secretary Decker of the Altoona board said, "We find many school superintendents taking courses in school business administration, while only a few school business officials take them. . . . Just as in earlier years the professionally trained superintendent was needed to supplement the time and ability of the board, so the present requirement is that there shall be highly trained and capable specialists in various lines of administration to supplement the superintendent's ability, time and authority even as he himself supplemented the board. May we not safely take the position that school business administration is the very chief of these special lines?"⁶

Such responsibilities as cost accounting; auditing; pay roll procedure and accounting; budgetary control of expenditures; purchase, storage and distribution of supplies; maintenance, operation and insurance of plant, are all primarily business functions for which special training is now provided. This has nowhere been better stated than in the report of Doctor Finegan to which I have already referred.

"There are certain definite fundamental principles underlying the successful administration of a public school system that are as fixed and immutable as the economic and fundamental principles that govern and control cost sheets, price lists and dividends in any great commercial or industrial enterprises. The failure to observe and to adhere strictly to these principles in educational procedure and administration will be as disastrous to real achievements in education as the violation of sound economic and business principles will be to financial aspects and profits in affairs conducted for monetary rewards."⁷

There is no valid reason for a school system to accept a man of lesser training than a private corporation can obtain for similar work and salary.

Bringing Business Practices Into the School

In the fourth place a business manager should be alert to business progress, he should hold memberships in organizations of business men and should read journals published for business executives. Only by these contacts can he bring into the school executive offices the best practices of the business world. Frequently money can be saved without loss of educational efficiency by an adaptation of these practices. For example, toward the close of the World War, the need for

conserving rubber led to conferences in which manufacturers agreed to a reduction from 287 styles and sizes to thirty-two. The work of Mr. Hoover as Secretary of Commerce from 1921 to 1928 in urging standardization and thereby reducing waste is too well known to require discussion here.

A Position of Many Responsibilities

Who is to keep the school system in touch with such movements if not the business manager? Who is to bring to the superintendents' council suggestions for standardization in our work if not this same official? In all school systems, the sizes and qualities of paper can be reduced to a few types, thereby enabling the district to obtain the prices bid on large orders. A standard quality of paper and other supplies can be worked out for each grade by committees of principals and teachers. Once this standard has been established, the filling of orders within this amount may be entrusted to clerks. Only requisitions that exceed the established standard need come to the executives. In such way the time of high-priced men is conserved. In cooperation with the superintendent, standards for school buildings and equipment are developed that save large cities hundreds of thousands of dollars.

In the fifth place the ideal business manager will possess in high degree a rather rare quality—the sense of proportion. The educational viewpoint, which has already been emphasized, will help him see things in the right perspective; his special training in making a careful analysis of school expenditures will show him where he can begin to effect savings, but a certain mental sureness and poise are necessary if he is to put first things first. The business manager who expects to make a record by drastic cuts in the modern school budget is doomed to disappointment. Regardless of whether he works under the superintendent or as his equal in rank, the chief item in the budget is for salaries of principals and teachers. In this the superintendent always has the control.

The superintendent of one of our larger cities recently announced with pride, and I think rightly so, that the proportion of his district budget devoted strictly to instruction had moved steadily upward during his administration until it is now above the median percentage for cities. Supt. A. L. Threlkeld of Denver has recently stated that, "Any school system that has less than 75 per cent of its current expense budget in the instruction item has something to explain, and any school system in which teachers' salaries constitute less than 65 per cent of the budget has some-

thing to explain. This is true because this item so largely represents the real purpose for which the schools are maintained."⁸

The business manager who recognizes such facts will realize that the fields in which he can make drastic cuts are limited. Moreover, he will be less likely to view as extravagance additional assistance desired by the superintendent to study class size and efficiency, to classify pupils and to develop courses of study, since it is only by such researches that the returns on the school dollar can be ascertained. As a result of such investigations, it may be possible to reduce instructional costs, to get better service for the same outlay or to obtain facts upon which to make a convincing accounting to the taxpayer.

In the sixth place, the outstanding business executive will be a first-class diplomat. He will be approached more often than will the superintendent by salesmen, insurance agents and representatives of local business houses. It is within his power to win or lose for the school district the respect and good will and influential part of his community.

Moreover, in many cities of moderate size the business manager must serve also as secretary of the board. In a large district the secretarial functions may well be discharged by a clerk directly responsible to the school board. He will serve as minute clerk and as custodian of records and valuable documents. His signature on letters, contracts and other documents will signify that these have been acted upon by the board officially. Through him will go complaints against the superintendent and his assistants together with final appeals from the superintendent's decisions.

Working Together for Education

In cities of moderate size—perhaps 50,000 to 200,000 in population—the business manager is compelled to act both as secretary of the school board, reporting directly to the board, and as business manager, reporting directly to the superintendent. In this capacity he often finds himself in the difficult position of keeping his left hand from knowing what his right hand is doing.

There are those who may be tempted to ask: What manner of man should the superintendent of schools be? Were I discussing this matter with superintendents I should certainly give attention to the answer to such challenge. But it is beside the point here other than to say he must be a highly educated, specially trained man in the professional phases of his work, and that he too must possess some of these great qualities such as a sense of proportion and diplomacy. In talking to superintendents of schools who fail in their

positions I find many who have splendid alibis. I do not always understand why so few people realize that they alone control their own conduct, that it is difficult to have much influence upon the other fellow. Therefore, if the business manager and the superintendent will each keep his eye not upon his colleagues but upon the children whose education is entrusted to the schools in which these executives work, they will cease interfering with one another and will pull together for the benefit of the school children.*

References

- ¹Heer, A. L., *The Present Status of Business Executives in the Public Schools of the United States in Cities with Twenty-five Thousand or More Inhabitants*, chap. 6, Doctor's Thesis, 1926, Ohio State University.
- ²Reeder, Ward G., *The Business Administration of a School System*, pp. 40-41, Boston, New York (etc.) Ginn and Company.
- ³Hunter, Fred M., *Efficient Expenditures of School Moneys*, Proceedings, 1928, National Education Association, p. 714.
- ⁴Englehardt, N. L. and Englehardt, Fred, *Public School Business Administration*, p. 30, New York, Teachers College, Columbia University.
- ⁵Finegan, Thomas E., *Report of National Commission on Economy and Efficiency of the Business Administration of City School Systems*, Proceedings, 1926, National Education Association, p. 762.
- ⁶Decker, W. N., *Relations of Business and Educational Departments in Local School Districts*, *American School Board Journal*, April, 1926, vol. 72, p. 61.
- ⁷Finegan, Thomas E., *Report of National Commission on Economy and Efficiency of the Business Administration of City School Systems*, Proceedings, 1926, National Education Association, p. 762.
- ⁸Threlkeld, A. L., *How the Superintendent Views the Business Department*, *The Nation's Schools*, September, 1928, vol. 2, no. 3, p. 58.

Health on Wheels for the Children of Los Angeles

Dentists and oculists now come to many Los Angeles school children in offices "on wheels," according to a report reaching the Office of Education, Washington, D. C.

Two "healthmobiles," thoroughly equipped to give children of this largest school district in the United States dental and eye examinations, have been pressed into service at the request of Dr. Sven Lokrantz, director of health in the Los Angeles school district for many years.

The first healthmobile camped in a school yard twelve miles from the nearest Los Angeles clinic. It was there five weeks, the center of attraction for school children in that territory. A second stopping place, forty miles from Los Angeles proper, but still within the confines of the expansive school district, was the healthmobile's center of service for more than five months.

Each "caravan of mercy," as the children sometimes call the healthmobiles, is equipped with a complete dental office, a desk for the nurse who assists the dentist and a room for testing the vision of pupils. The charge to each child for a dental treatment or an eye examination is only ten cents. Fees go to local parent-teacher associations, since the board of education bears the expense.

*Read before the meeting of the National Association of Public School Business Officials, Richmond, Va., May 20, 1931.

A School Building That Harmonizes With the Homes It Serves

The architects of the Monticello Junior High School, Cleveland Heights, Ohio, have sought to surround the school with an air of domesticity, despite its size

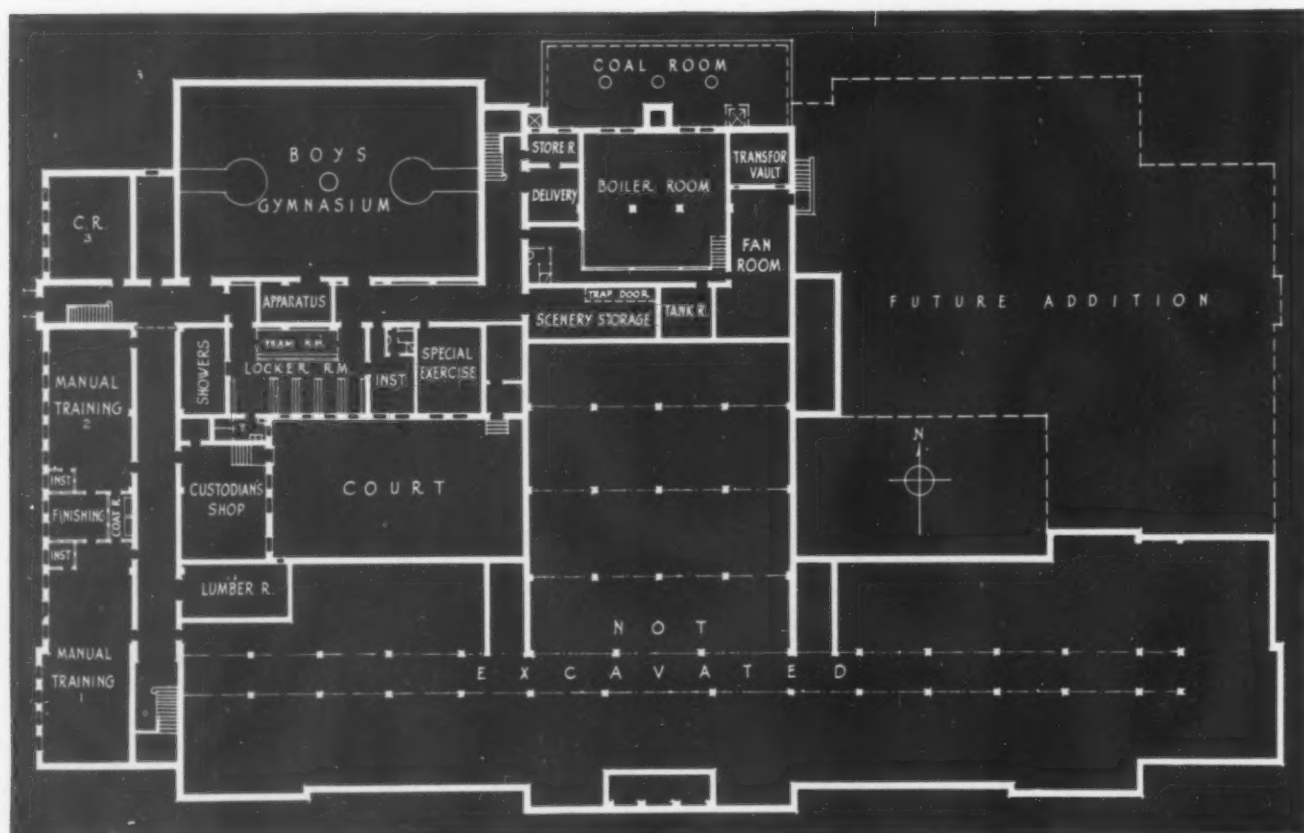
By M. P. HALPERIN, John H. Graham & Co., Architects, Cleveland

THE new Monticello Junior High School, Cleveland Heights, Ohio, is situated on a plot of seven acres at the corner of Monticello Boulevard and Yellowstone Road. These seven acres are ample to provide also a regulation size football field, several tennis courts and boys' and girls' play fields.

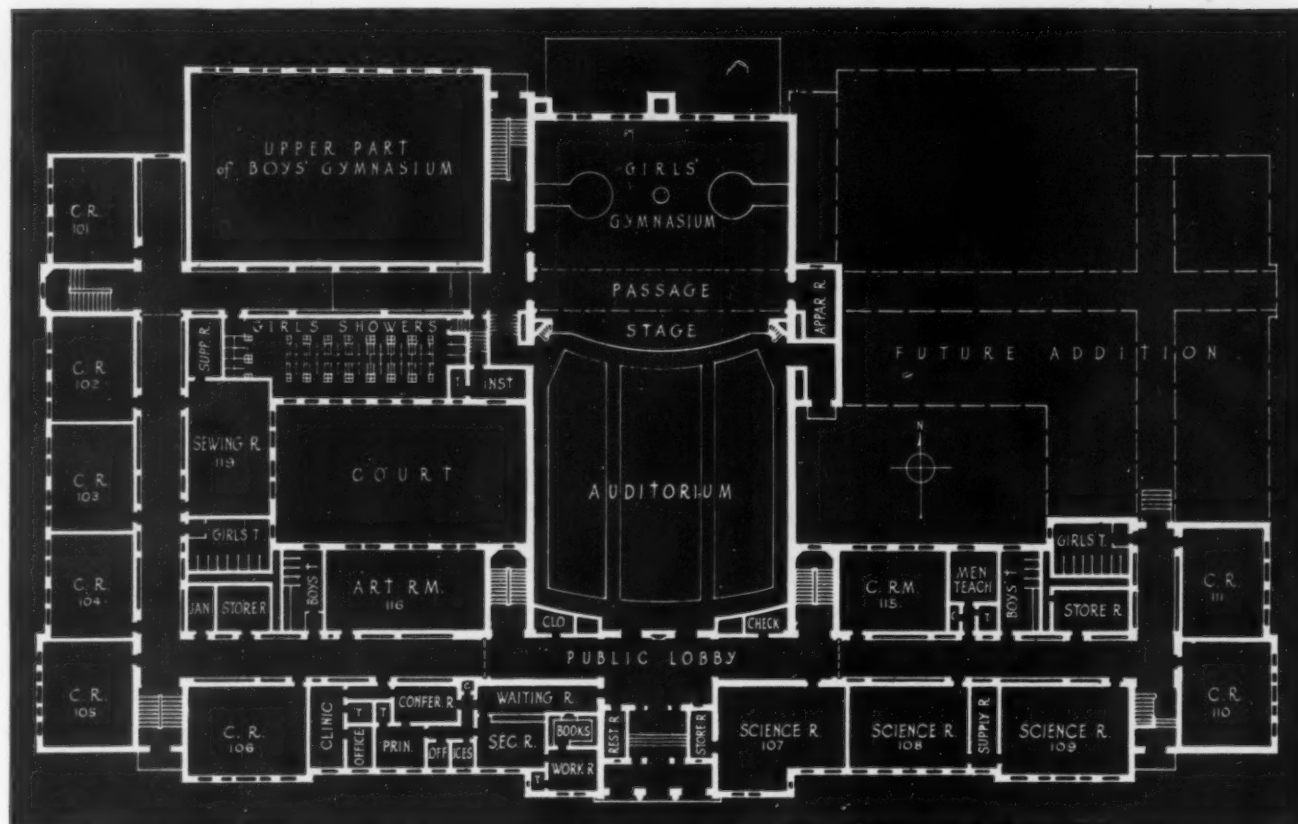
Because of the existing slope of the grounds, the architects decided to face the building on Monticello Boulevard, to assure sufficient light in the boiler room, and to provide ample ceiling heights in the boys' gymnasium by locating it on the ground floor adjacent to the athletic field. This

arrangement also placed the classroom wings in an eastern or western exposure, with the general science rooms facing south and the art rooms facing north. These various exposures are deemed to be ideal for obtaining the maximum amount of daylight.

The large units of the plan, such as the auditorium-gymnasium, the library and the cafeteria-study hall, were placed in the center of the building where they may be reached easily and quickly by the pupils. This reduces the distance of travel and the corresponding time consumed by the pupils in walking from their classrooms to these central



This plan of the ground floor shows the convenient location of the boys' gymnasium and its accessibility to the athletic field just outside.



The school auditorium, various classrooms, the girls' gymnasium together with the administrative offices are on the first floor.

units. To make the auditorium-gymnasium and cafeteria-study hall even more accessible, two folding soundproof partitions were installed on the stage to make a passage between the present classroom wing and the one to be built in the future. This saves about ninety feet in the distance of travel and avoids confusion and crowding in the corridors.

Auditorium Is Available for Public Use

There are those who hold that the placing of the auditorium unit at one side of the school building proper with a separate entrance for its use as a community center makes it easy to close the classroom corridor to intruders. This thesis, however, does not seem sufficiently weighty to counterbalance the advantages of a central location for the auditorium. By the simple expedient of two ornamental iron folding gates (indicated by dotted lines on the illustrations) at either side of the public lobby, the public gains access to the auditorium on the first floor and to the library and cafeteria on the second floor, without any possibility of intruding into the classrooms.

Structurally, the placing of the cafeteria-study hall above the auditorium resulted in a simple and economical steel framing design. Twelve-inch "H" columns were set in the exterior wall supporting the roof trusses which span the entire width of the

central portion. From each truss, hangers consisting of light angle sections are suspended. These in turn carry the second floor beams. The auditorium is thus left free from any obstructions, and the thickness of the second floor construction is reduced to twelve inches. In this way a considerable saving in the height of the building was achieved.

Structural columns were also used in all the corridor walls, with a four-inch tile partition between them, and all the available space was utilized for pupils' lockers, 12 by 15 by 60 inches. This arrangement is preferred to separate locker alcoves, because of the ease with which the lockers may be supervised. The deploying of students between periods, moreover, tends to lessen the noise and the tendency for playful pranks, so prevalent in the usual congested locker alcoves.

Structural Details Carefully Planned

The exterior walls are all load bearing masonry, with two-inch tile furring on the inside. The tile in turn was waterproofed before the plastering was done, thus assuring a weathertight wall that would withstand the strongest rains and snows without moisture seepage. The floors in all the classrooms are linoleum, laid directly on the concrete. Corridors, kitchen, cafeteria and cooking rooms all have composition floors. White terrazzo

floors were used in the toilet rooms and main entrance lobby.

The windows are all double hung wood sash, painted white in the traditional colonial manner. Pivot strips were installed at the sides of all the windows to make the sash reversible. In this way, the windows may be easily cleaned from the inside, and natural ventilation is assured even during rainy weather.

How School Is Ventilated and Lighted

All classrooms are ventilated by unit heaters placed under the window sills. These heaters draw fresh air directly from the outside through grilles in the exterior wall. The foul air is exhausted by ventilating ducts on the corridor walls, which are collected in a central duct at the ceiling of the first-floor corridor. Placing the main exhaust duct at the first-floor corridor ceiling instead of in the attic has effected a considerable saving in duct work, since the grilles in the classrooms on the second floor are at the floor base, which means that their corresponding ducts are only about two feet in length.

Classroom and study hall lighting is effected through prismatic glass fixtures of the enclosed type. These provide a uniform and agreeable illumination of adequate intensity, with a minimum of glare and shadow. The auditorium and other special rooms are equipped with fixtures of

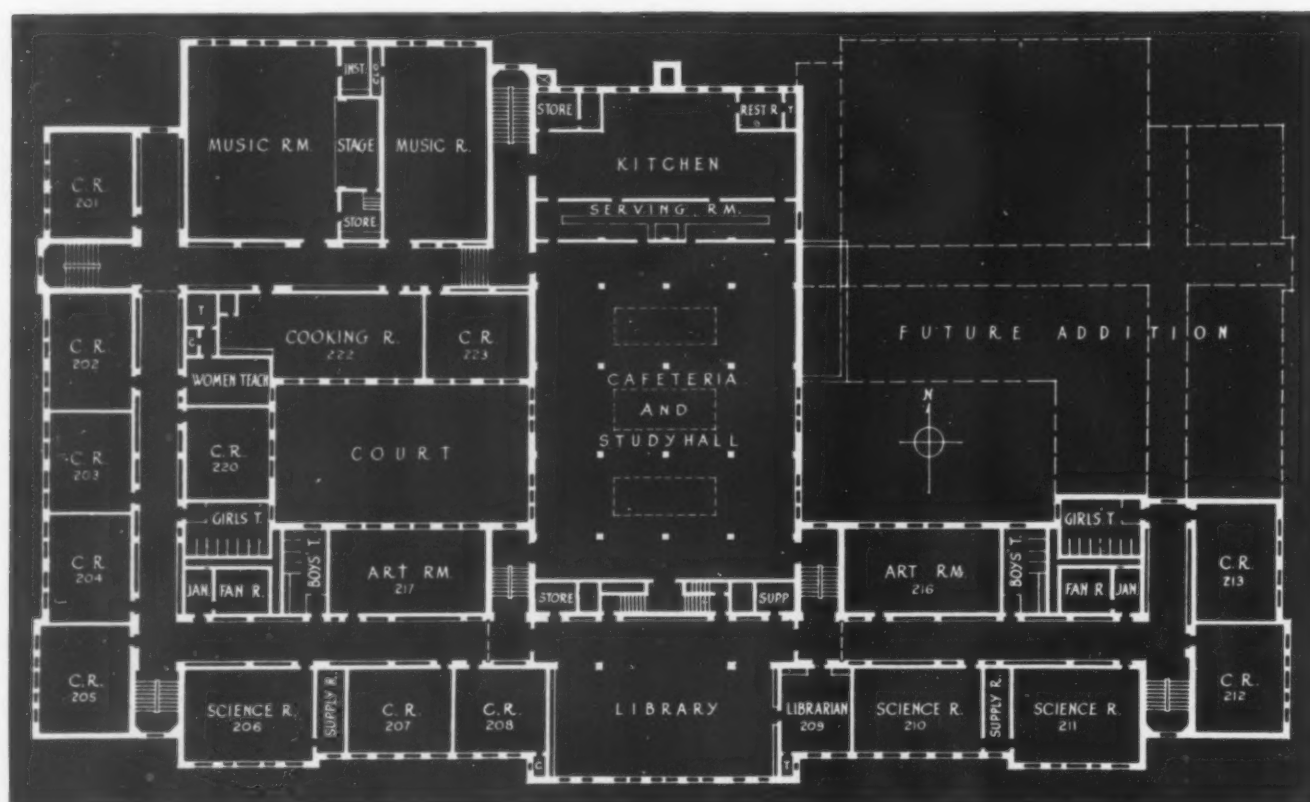
special design harmonizing with the architectural character of these rooms.

The electrical distribution is so arranged that each classroom has its individual lighting circuit connected to distribution panels, which are centrally located, so that the number of extra long circuits is negligible. Convenience outlets are provided in all classrooms and study halls.

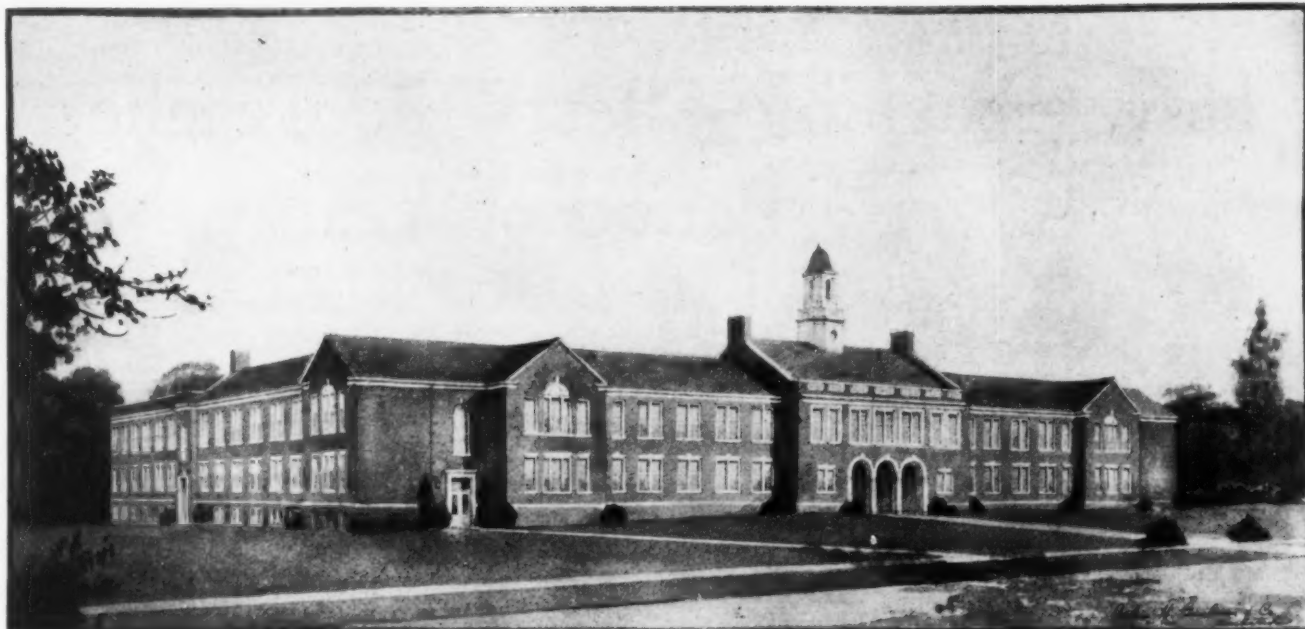
An extensive radio conduit system, designed to accommodate flush type speakers in each classroom, with the future control panel in the principal's office, has been installed, together with a complete electric clock and program bell system and the most modern type of fire alarm equipment.

In recognition of the accepted theory that modern education is an integral part of the life of the pupil and that experience is the most vital factor in learning, it was felt that since the life of the child radiates from two foci, the home and the school, the physical aspect of these two locations must not be dissimilar if a complete and harmonious curve for the child's horizon was to be created. If the school and the home are to be in harmony, the school building must reflect architecturally the physical aspect of the homes it serves.

To impart an air of domesticity to the design of the Monticello Junior High School, in spite of its rather large size (the front is 330 feet long), the school was divided into three units. The central unit expresses its function in plan. The public



The cafeteria-study hall and its adjacent kitchen and the library and music rooms are parts of the efficient arrangement of the second floor.



The simplicity and wholesomeness of the whole plan of the Monticello Junior High School, Cleveland Heights, Ohio, are reflected in the exterior, of brick with stone trim.

entrance is at the grade level, the library is on the second floor and a cupola marks the location of the auditorium and gymnasium units which are also used by the community at times. It will be noticed that the triple-arch entrance motif, with the cornice and balustrade above, is on a residential scale, readily adapted as a background for a group of children and devoid of any aspect of monumentality so evident in the stone collonade and huge parapet wall of the usual educational "institution."

The domestic aspect is further enhanced by the slate roof over the entire front. Some architects consider a sloping slate roof too costly for the average schoolhouse. If, however, the slate is applied on wood sheeting supported by wood rafters, the cost is practically the same as that of a flat pitched roof plus a suspended ceiling below. The objection to wood roof construction from the fire hazard point of view was overcome by the construction of a light concrete slab at the second floor ceiling level to separate the fireproof building from the roof construction.

Cost Was Not Excessive

The simplicity, frankness and wholesomeness of the design resulted in a decidedly economical structure. The building contains twenty-one classrooms, three art rooms, six rooms for general science, two manual training rooms and two music rooms, besides administration offices, which are so planned that no changes will be necessary when the future wings are built and the pupil capacity increased. The auditorium seats 860 persons. There are two gymnasiums, both of which have

locker and shower rooms adjoining them. A standard motion picture booth is provided in the auditorium. A trophy case has been placed in the public lobby.

The building contains 1,600,000 cubic feet and was erected at a total cost of \$550,000, exclusive of equipment.

How the Economic Crisis Has Affected the Rural School

Many school teachers' salaries have been reduced and many rural schools have been closed because of a lack of school revenue, according to Katherine M. Cook, chief, division of special problems, Office of Education.

So severe is the economic crisis in some states that rural education is suffering and the future is not encouraging. Farmers, unable to pay their taxes in many sections, due to the drought and the general economic depression, have not put into the treasuries revenue anticipated for the maintenance of the public schools.

Educators are attempting to prevent the curtailment of education, and progress has been made in some states. Arkansas, for example, has recently enacted very constructive educational legislation.

A new law makes the state superintendent an appointive office by the state board of education. A committee has been appointed by the legislature to make special recommendations relative to school finance. The whole educational program has received additional impetus through the provision of \$500,000 for equalization funds.

How Teaching Affects the Teacher Over a Period of Years

Will a lifetime spent in the schoolroom enhance the teacher's usefulness or will it narrow her viewpoint? This article points out dangers she should avoid and how the administrator may help her

By P. W. HORN, President, Texas Technological College, Lubbock, Tex.

AN IMPORTANT question in connection with any given line of work, and one that does not always receive the consideration it deserves, is that of the probable effect the work will have upon the worker in the course of years.

It is generally recognized that one of the greatest educational agencies in the world is the job. In most cases if a young man enters upon any useful occupation he will receive more or less of an education from it. For instance, if a man makes a success as a lawyer or a doctor, it is fairly certain that the practice of his profession will give him a considerable degree of education. The man who makes a success as a banker or a farmer or a merchant will find that he receives during the process a certain type of training that he would not ordinarily receive from a course in college.

Yet it is an undeniable fact that in certain types of work the influence of the work upon the worker is distinctly bad. It is worth while to inquire what effect a lifetime of teaching will probably have upon the teacher. Will it tend to widen her horizon and enhance her usefulness, or will it have the opposite effect?

It is obviously dangerous to try to generalize on such a subject as sometimes the effect is of the one kind and sometimes it is of the other. Teaching broadens some teachers and narrows others. Obviously, it is worth while for the teacher to try so to adjust herself to her work that its effect upon her will be as beneficial as possible.

It cannot be denied that in many quarters there is a belief that, after a certain number of years, additional experience in teaching becomes a liability rather than an asset. In classes in school supervision I have asked scores of superintendents a question of this kind: "If three teachers applying to you for a given position seemed to be practically equal in every particular except that one of them had taught for two years, another for

ten years and the third for twenty years, which of the three would you choose?" The answers have been practically all the same. In fact, I do not recall a single variation. The superintendents unanimously answered that if all things else were equal, they would choose the teacher who had taught for ten years. In other words, they were practically unanimous in the implication that after ten years the work of teaching is likely to take more away from a teacher than it brings to her.

Whether or not these men are correct in their views, I do not pretend to say. Of this I am certain, however, that if the life of greatest efficiency in teaching is bound up within ten years, then it is fearfully short. I hope that the men questioned were mistaken. If, however, they were correct, then it seems that the work of teaching is harder upon teachers than we ordinarily think. It will also be clear that if we can adjust our work to add even one year to the greatest efficiency of teaching, we shall be doing a great service to the teachers themselves and to the cause of education as well.

Danger Points That Must Be Watched

One of the ways to solve this problem is by watching the danger points. Undoubtedly the profession of teaching has them. Nothing that is connected with teaching is inherently dangerous. There are, however, a number of dangers frequently connected with teaching that tend to break down the teacher before her time. It is well worth while to point out these dangers so that the teacher may make every effort to avoid them.

The first of these has to do with authority. The authority that the teacher herself has may prove a source of danger; and the authority that others have over her may do the same thing.

In general, it may be conceded that the possession of authority is in itself dangerous. No matter how good a man may be, if there is placed in his

hands a great amount of authority over other people, the result will be a decided test of his own character. Despotism is ordinarily harder upon the despot than it is upon those over whom he rules. Even in the most democratic society, it is absolutely necessary that a great deal of authority be placed in the hands of certain qualified persons; but it is ordinarily trying upon those in whose hands it is placed.

Few teachers realize the extent of the authority placed upon them. Dr. A. E. Winship is responsible for the story that when Theodore Roosevelt was president of the United States he once tried to get his little son, Archie, excused from one of the grades in the public schools that he might be present on a certain occasion when a famous Eastern potentate was visiting the White House. The teacher was unable to find anything in the rule book covering the case and so she politely declined to allow Archie to go home. Theodore Roosevelt was commander in chief of the army and of the navy of the United States, and could appoint judges of the supreme court and members of the diplomatic corps, but he was absolutely unable to get one small boy excused from the Washington schools when one determined grade teacher said that he could not go home.

The teacher who thus successfully defied the president of the United States was no doubt considered "bossy." I do not know whether or not the teacher in question subsequently married, but if she did, I would not be greatly surprised to learn that her husband found her hard to get along with.

But if the authority that the teacher holds over her pupils may possibly have a bad effect upon her, the authority that the principal, the supervisor, the superintendent and the school board have over her may likewise prove a severe strain. The more autocratic a teacher is in dealing with her pupils, the more she may fear the autocracy of the authorities above her. Rightly or wrongly, there is a fear concerning appointments and positions and salary advances that does not tend to develop or retain the best of which a teacher is capable.

Less "Driving" and More "Leading"

How may this danger point be avoided? Simply by depending less upon authority either upward or downward and by substituting saner and friendlier relations on both sides; by depending less upon driving and more upon leading. The teacher who thinks less about how to make her pupils do things and more about how to lead and inspire them to do those things is at least in a receptive condition for more of leadership and less of compulsion from the superintendent's office.

The second danger point in the effect of teaching upon the teacher lies in the fact that so much of the teacher's contact is with persons and things that are in some manner inferior to her. For instance, a large part of the teacher's life is spent in contact with childhood. The child mind is of necessity less mature than her own. There is danger that the constant effort to make the adjustments to the child mind may result in a permanent softening of the sinews of her own.

The Value of Outside Contacts

There are two ways in which this can be avoided. One is by emphasizing the glory of childhood rather than its weakness. It is only in a certain sense that the mind of the child is inferior to that of the teacher. The teacher who never sees anything about the child except his weakness will never see the child as he really is. The teacher who thinks of her pupils in terms not of their weaknesses but of their capabilities, is on the high road to developing not only the best in the children, but also the best in herself.

In the next place, the teacher should see to it that not all of her contacts are with children. Every person needs a certain amount of association with those of his own kind. The man whose work is almost exclusively with women, even though they are the ablest and the best of women, will find it to his advantage to mix with men occasionally. This is one reason why so many school men are members of civic clubs and why they profit by such membership. The woman whose work brings her almost exclusively in contact with men, no matter how able these men may be, or how good, will find that she is losing something unless she sometimes comes in contact with other women of her own type and of other types. For one grade teacher who neglects her work on account of her social contacts, there are twenty teachers whose work would be better if they had more social contacts.

Then, there is the danger that comes from too frequent contacts with small things. My prize illustration of this comes from the time when I once watched a grade teacher spend perhaps half of one recitation period in trying to teach the class how to make quotation marks. My recollection is that, according to her theory, a quotation mark either consists of a circular black mark with a tail hanging down, or else of the same mark with the tail pointing up. I have never been able to remember which it was; nor do I care. It can be taken for granted, however, that a teacher who spends most of her time dealing with the exact way of making quotation marks is in serious danger of devoting so much attention to insignificant details

that she will have no time for things that are really important.

I presume that in teaching English composition it is necessary to give the pupils instruction as to the width of the margin on the pages on which they write, but I am certain that the teacher of English who lays the major emphasis upon such matters as the width of the margin is not likely to go far in teaching her pupils how to write good English.

This tendency to emphasize small things is sometimes called meticulousness. The person who habitually overemphasizes unimportant details is sometimes accused of "old-maidishness." If this latter term is used without any reference to the calendar, and without restriction as to sex, it is perhaps as good as any.

What is the remedy? Here again it is easy to state, although perhaps difficult to apply. If we wish to avoid the dangers that come from the study of education in its smaller aspects, the best way to do it is by concentrating on its larger ramifications. There is no subject that is of itself greater than the subject of education. If we have allowed it to become cluttered up with a number of insignificant details, the fault is with the worker rather than with the work.

The nervous strain that frequently accompanies the work of teaching is another difficulty that ordinarily arises from undue attention to trivialities. A mere inflection of a boy's voice that would sound impudent in the schoolroom may sound either funny or foolish on the outside of the school. A well developed sense of humor on the part of the teacher can take the strain out of a great many situations that might otherwise be deadly in their effects.

Mechanical Teaching Another Pitfall

A further danger to the teacher lies in the fact that when once the details of her specific work are mastered, they may become so easy as to be mechanical. This danger is to be found in all kinds of school work, but particularly in the lower grades. If a man teaches Greek in a college for thirty years, there is serious danger that he may allow himself to become lopsided. If a woman teaches spelling in the intermediate grades for thirty years, the danger to her is even greater. If she teaches the low third grade in a city school system for thirty years, it will be almost miraculous if she does not reach the condition sometimes referred to as "getting into a rut."

How can we avoid the danger of staying in a rut? We must simply get out of the rut. If a teacher has taught the third grade for so long a time that her work has become almost entirely

mechanical, she doubtless feels that she has an easy job. She is correct in this feeling, but the fact remains that she has a dangerous job, nevertheless. The danger is that she will get deeper and deeper into the rut each year she teaches. If, in such a case, the teacher has regard for developing her own capacity rather than for having an easy time, the thing for her to do is to go to the superintendent or principal and respectfully request that she be allowed to take the second grade or the first or the fourth. She may astonish the principal or superintendent, but if he is wise he will at least give her request careful consideration.

Growth Is the Remedy

The extreme result of the process of getting into a rut is sometimes referred to as "ossification." Almost every superintendent knows the teacher who is so "set in her ways" that he can do nothing with her. Ordinarily, he simply leaves her alone as long as she is doing her work measurably well. He knows that sooner or later the time will come when her usefulness is over. Frequently, it is over far sooner than there is any occasion or need for it to be.

The remedy is found in one word—growth. No teacher begins to ossify as long as she continues to grow. It is only after growth ceases that ossification sets in. If it is true that teachers lose their greatest effectiveness sooner than do lawyers and doctors, the only reason assignable is that they cease to grow sooner than do lawyers and doctors. This is why wise superintendents sometimes insist upon new books and new papers and new studies more than some teachers think they ought to. It is because they know only too well the dangers that come from the cessation of growth.

Along with these other dangers, there are the dangers that come from loss of enthusiasm and lowering of standards. Any man who comes in contact with great numbers of his fellow men will find among them a certain number who betray his confidence. There is danger that in such a case he may become cynical and may lose his faith in human beings. This danger is just as great in the case of teachers who in the course of a lifetime meet many thousands of pupils as it is in the case of any other type of worker.

The remedy consists simply in concentrating one's thought upon the good rather than upon the bad. It is the cardinal item of the teacher's faith that in the long run humanity is worth while. For every pupil who betrays the confidence placed in him, there are thousands of boys and girls who justify it. If the proportions were reversed, then indeed the whole work of education must be recognized as a failure.

Cleaning and Treating Woodwork and Furniture

Dusting, so important in preserving the appearance of school furniture, is not a haphazard process but one that requires an infinite amount of study and application

By CHARLES E. REEVES, Elmira College, Elmira, N. Y.

REMOVING temporary dust and doing away with the more or less permanent dirt and spots are necessary to preserve and improve the appearance of furniture and woodwork.

The amount of dust to be removed from furniture and woodwork will depend upon such factors as whether the floors are oiled, whether the playgrounds are well surfaced and the streets paved, whether a central vacuum cleaner is used for cleaning the floors, whether cement and terrazzo floors are filled or treated with a cement hardener,

whether foot scrapers and door mats are provided at the entrances, whether the chalk used in the classrooms is hard or soft, whether the furnace room doors and the classroom windows are fitted tightly and whether the dust is drawn into the ventilating system. Since conditions are never perfect for the elimination of dust, the dusting of school furniture and woodwork must be regularly performed if the rooms are to look well.¹

¹Reeves, C. E., and Ganders, H. S., *School Building Management*, chap. 10, Bureau of Publications, Teachers College, Columbia University.



Active hands and feet are hard on school furniture, which demands constant care.

Classroom furniture should be dusted every day the rooms are in use. The best time is in the morning before school convenes. Dust from the air will have settled by then. Dusting the rooms immediately after they have been swept in the late afternoon is unsatisfactory because the desks will be dusty by morning.

Most woodwork and the vertical parts of desks and seats will not need to be dusted daily. Dusting of such parts once a week on Saturdays should be sufficient. Walls and ceilings should be dusted at the three vacation periods, summer, Christmas and Easter.

Some Pointers on Dusting

Drinking fountains should be of the type that is attached to the wall or of the single pedestal type to avoid the necessity for dusting under them. If there is a space beneath them that cannot be swept, it should be brushed out daily. Radiators should be eight or more inches above the floor so that the floor space beneath may be cleaned with a floor brush, a floor mop or a vacuum cleaner. If they are built close to the floor, the space should be gone over daily with a counter brush. Cases and cupboards should either be built to the floor or they should be high enough from the floor to permit the easy sweeping of the floor space beneath. If this space must be brushed, it should be done twice a week with a counter brush.

A sanitary duster, a large piece of cheesecloth or a loosely knit dust cloth is best for dusting. Properly treated and used, any one of these is effective. The dust should be absorbed within the folds of the duster rather than stirred up to settle later upon the furniture and woodwork. For this reason a feather duster should not be used. The sanitary duster of soft woolen or cotton yarn, attached to a wire frame and having a short handle or some other means for holding it, is to be preferred, from the standpoint of time required, to remove dust from furniture and woodwork. The cheesecloth has an advantage in dusting some parts of the woodwork and the iron standards of desks and seats. It is inexpensive and may be disposed of when it becomes soiled while the sanitary duster must usually be cleaned.

Since dusting should assure the removal of the dust, dusters should be treated so they will hold dust. Untreated dusters of any kind will not retain all of the dust, even if they are used carefully. Water is not a good treatment since its continued use will tend to dull the finish of furniture and woodwork. The water dampened duster has a further disadvantage in that it needs to be washed more frequently than an oiled duster. This need may occur several times during a single morning's

dusting. If it is not kept clean it is likely to leave streaks on the desks.

Sanitary dusters and dust cloths are treated chemically to retain the dust. Cedar oil, furniture polish or kerosene is also satisfactory, but each should be used sparingly, and the oil or polish should be allowed to evaporate until only enough remains to catch and hold the dust. The duster that is chemically treated or treated with cedar oil or kerosene is to be preferred to the water dampened or untreated duster and it has an advantage over the water dampened duster in that it helps to preserve the finish of furniture. Treatment seems to have little effect upon the time required to dust unless it may be said to increase the time slightly because of the more thorough work performed by the treated duster. Tests showed that it required on an average only sixteen seconds more time per classroom to dust with treated dusters than with untreated ones.

A janitor should dust but one row of desks at a time, the row to his right if he is right-handed. He should return through the same aisle dusting the next row, which will then be the row to his right. He should not attempt to dust two rows of desks with a duster in each hand, nor turn from side to side to dust two rows of desks, one of which will be on the side opposite from the hand in which he holds the duster.

One of three different motions is used in dusting, (1) flipping the duster against the parts being dusted, (2) a circular motion over desks, probably the most commonly used and (3) wiping the space back and forth. Of these the flipping motion is entirely unsatisfactory since it stirs up the dust, and prevents the duster from retaining it. Then, too, some portions of the furniture are not touched. The circular motion is not entirely satisfactory since some portions are dusted several times, while the corners and the edges may not be dusted at all. The systematic back and forth motion is to be preferred, since all parts of the desks and seats are dusted by this method and since it does not stir up the dust. This motion is more rapid than the circular motion but less rapid than the superficial method of flipping the duster against the pieces being dusted.

Caring for Walls and Ceilings

Walls and ceilings may be dusted by vacuum if a central plant has been installed. If not, they may be dusted by means of a long-handled brush or duster, or a floor brush wrapped with cheesecloth, the brush having an extended handle. Another possibility is a long-handled floor brush, or wall duster, to be used by the janitor standing upon a board placed on the steps of two ladders or on two

barrels. Dusters for walls and ceilings must be left untreated to avoid streaks.

When the walls are dusted, all pictures, mirrors and window shades should be removed. These should be dusted, the glass parts washed and the wooden parts treated with furniture polish before they are replaced.

When Liquid Cleaners Should Be Used

Most woodwork, furniture and fixtures should usually be cleaned with water and soap chips or kerosene at the three vacation periods. This is necessary to remove dirt that cannot be removed

should be treated with any good furniture polish.

Little can be done to walls and ceilings other than dry dusting and occasionally repainting them. If they are painted with a gloss finish, it is possible to wash them, although the labor involved makes it almost as expensive as repainting. If they are painted in a dull finish, no attempt should be made to wash the walls and ceilings above the wainscoting.

Ink spots are sometimes difficult to remove from floors because inks are not all of the same composition. One of the following solutions will usually remove ink spots: oxalic acid crystals dissolved in



Home economics and laboratory work tables present cleaning and maintenance problems.

by means of a dry, treated duster. Those parts of the woodwork, the furniture and the fixtures that do not receive daily or weekly dusting will certainly need such cleaning. Desks and tables become dirty with a permanent dirt along the edges of the tops. The appearance of the water used in washing them will reveal this.

Woodwork, furniture and fixtures, if they are not too dirty, may best be cleaned by the application of a good grade of furniture polish. If they are very dirty, they may be cleaned by means of kerosene or water. Grease may be removed by the use of kerosene, while candy and paste are easily dissolved by water. The application of water to woodwork and furniture, however, should be avoided, if possible, because it will dull the finish. If the furniture is waxed with paraffin, the use of water may result in the appearance of white spots. White spots that may appear because of excessive dampness may be removed if they are rubbed with a cloth treated with denatured alcohol. After the woodwork and furniture have been cleaned, they

hot water; muriatic acid weakened with water; spirits of niter or phosphoric acid. If the first one that is tried does not remove a spot, another should be used. These should be applied only to the spots that have been discolored with the ink and they should be applied as soon as possible after the ink has been spilled.

Liquid wax, turpentine and oil, or some good furniture polish, should be applied liberally to school furniture and woodwork at the three vacation periods. After the treatment has been applied, the furniture should be left for a day or two and then polished, preferably with a soft woolen cloth.

Repainting and Revarnishing

Furniture and woodwork will occasionally need to be repainted, revarnished or rewaxed. While skilled workmen should usually be employed for this work, the janitor often finds that he must do it. If the janitor is skillful at the work, he often finds it a good summer maintenance job.

One method of removing old paint or varnish is

to sand the surface with an electric floor machine. There are also commercial varnish and paint removers that are effective. The janitor can make a paint and varnish remover by using the following formula: Heat separately in a double boiler one quart of benzol and one-half pint of acetone. Mix, and add two ounces of paraffin wax shaved thin. Pour into an earthenware jar to cool. When cool, add one quart of denatured alcohol and one pint of benzine or gasoline. Keep the mixture away from fire.

How Furniture Can Be Refinished

This preparation should be spread on the parts from which paint is to be removed. The paraffin will form a coating that will keep the material from evaporating while it acts upon the paint or varnish. An hour or two after the preparation has been applied, it may readily be scraped off with a flat bladed knife, together with the paint or varnish.

If the furniture is scratched or cut, it should be sanded until smooth before it is refinished. The process of refinishing is important. The surface must be perfectly clean. It should first be washed with a neutral soap in warm water, then rinsed and allowed to dry for a day or more. Sandpaper should then be applied lightly, after which a penetrating stain, such as may be purchased or made from a color ground in linseed oil, turpentine and Japan drier, should be applied. A few minutes after the stain has been applied, all excess stain should be removed with a cloth and the furniture allowed to dry for a day or two. A filler should next be used; then a thin coat of shellac, followed by two coats of varnish two or three days apart. If a wax finish is desired, wax may be applied instead of varnish. In this case several coats of shellac, rather than one, should be applied. After the wax is applied, the furniture should be highly polished.

"Renewing" School Furniture.

Sometimes furniture or woodwork will not need refinishing; rather it will need renewing. In this case it should be treated with a solution of one-half pound of sal soda to a gallon of warm water. It should be sanded, after which a renewer should be applied. It will then be ready for an application of varnish or wax. If wax is used, the furniture should be polished.

To fill deep cuts in the furniture the janitor should use stick shellac which matches in color the furniture that is being repaired. The janitor may make his own material for filling the cuts by melting together one tablespoonful of flake shellac, one tablespoonful of rosin and a small piece of beeswax

about three-fourths of an inch in diameter. A dry color powder should be added to match the furniture and the cuts should be filled while the material is hot.

The woodwork, the furniture and the fixtures should always appear clean and lustrous. No oily, gummy spots or finger marks should show on the surfaces. This means that in polishing, more attention should be given to the front of desk tops and tables, since these most often become dirty and marked with use. If the woodwork and the furniture are to be properly cared for, the cooperation of children will have to be obtained. This means that the teachers and the children, as well as janitors, will have to take a measure of responsibility. Desks that are cut, scratched and marked cannot be made to present a good appearance, unless they are refinished, no matter what care a janitor may give them.

Summary

A summary of the preceding paragraphs reveals the following points:

1. Classroom furniture should be dusted daily in the mornings, the woodwork and the vertical parts of furniture should be dusted weekly on Saturdays while the walls, the ceilings and the pictures should be dusted three times a year at vacation periods.
2. A sanitary yarn duster or a soft dust cloth will be effective in removing the dust. Dusting with a sanitary duster will require less time than dusting with dust cloths. A feather duster will stir up the dust and for this reason should not be used.
3. Dusters should be treated lightly with cedar oil, furniture polish or kerosene so that they will retain the dust.
4. A janitor should dust one row of desks at a time, the row to his right as he passes through an aisle, if he is right-handed. He should use a systematic back and forth motion over the surfaces of desks.
5. Fixed dirt should be removed from the furniture, the woodwork, the pictures and the fixtures at the three vacation periods. This may be done by washing the parts with water or kerosene or by applying a furniture polish containing cleanser. Water may dull the finish. If it is used, it should be followed by the application of furniture polish.
6. White spots caused by moisture on paraffin wax may be removed by applying denatured alcohol to the spots.
7. Old paint and varnish may be removed from the furniture by placing sandpaper over a wooden block in an electric floor machine, or by applying certain materials to soften the paint or varnish so it may be removed by scraping.

Teaching Iowa's Rural Pupils to Sing

By AGNES SAMUELSON, Superintendent of Public Instruction, Des Moines, Iowa

This department of rural education is conducted by Helen Heffernan, chief, division of rural education, state department of education for California, Sacramento, and president, department of rural education, National Education Association.

FOR five years interest in music in the rural districts of Iowa has been developing to a remarkable degree and we have been seeking a workable plan for successful teaching of music in the one-room rural schools.

There are nearly ten thousand of these schools scattered throughout the ninety-nine counties of the state. The plan for teaching must be one that can be carried on by teachers in the rural schools, most of whom are not highly trained, particularly in music. There are no supervisors of music in the state department of public instruction or in the several counties.

The plan in use is the result of the lifelong work of Prof. C. A. Fullerton, head of the music department of the Iowa State Teachers' College. It is simple and easy to follow even though the teacher has had no special training in music and is not even a singer. With the aid of the talking machine and a few records made according to the plan, the instruction has been given with success.

Principles of the New Method

The pupils first sing the easy phrases, then the harder ones. The model is there, so the child may hear the pattern sung by the artist as often as is necessary for him to imitate it. He hears good music sung with correct rhythm. To hear his pattern he must use a light tone. This has practically eliminated the harsh, unmelodious tones often heard in group singing.

Each country school child in Grades 4 to 8 inclusive is eligible for his school and county choir. He must pass singing and rhythm tests with the victrola. Many primary pupils have passed these tests. A simple chart makes it easy for the teacher to keep individual records and these enable even

the most overworked county superintendent to supervise the progress in music.

Since the plan was put into effect, county choruses of 100 to 500 pupils have been singing at rural graduation exercises and at various farm and community gatherings. Often the pupil does not know the pupils standing beside him and the only rehearsal is held a few minutes before the performance, so that the choir may learn to follow the leader's directions. This experience has social value in addition to the cultural value of the music training.

Chorus to Sing at State Fair

The program of work has attracted so much attention and has been so popular because of its simplicity and effectiveness in teaching appreciation of music that it is to be a major feature of the Sunday program at the Iowa State Fair, Sunday, August 24. Over six thousand pupils, all from one-room rural schools, have passed the tests and have received from the department of public instruction certificates of eligibility to sing in the great choir. This mammoth chorus, the first of its kind in the world, will serve to interpret a tried and tested educational program. With the splendid seating facilities afforded by the new amphitheater and education building of the Iowa State Fair, it is estimated that 25,000 people will be assembled as an audience for this program.

The whole program is a manifestation of what a state can accomplish when its efforts are concentrated upon a worth while objective. Jessie M. Parker, head of the rural division of the department of public instruction, has directed the program. She has had the cooperation of the Iowa State Teachers' College, through which the services

of the faculty of the music department were made available to the country schools. Professor Fullerton, the originator of this plan, and Prof. Irving Wolfe have had charge of the study centers through which teachers in the various counties were made familiar with the songs and the methods. Other members of the music faculty, Olive Barker, Minnie Starr, Prof. Harry Kauffman and Alpha Mayfield, have also rendered valuable assistance in this extension work.

Much of the success is due to the hearty cooperation of the county superintendents of the state who carried the burden of organizing the county choirs, securing the cooperation of the parents and creating enthusiasm for the program among teachers and pupils. The teachers have responded splendidly. Many of them have given their time all through the summer so that pupils who needed training on one or two songs might pass the tests and be eligible for the state chorus.

The State Fair Board has helped in every way possible to make this project of the department of public instruction an overwhelming success.

A Suggested Advisory Program for Small Systems

In small school systems where no previous attempt has been made to make a special drive for the improvement of certain selected aspects of the instructional program of supervision, it is better not to attempt a complicated or an advanced supervisory program the first year, advises Fred C. Ayer, professor of educational administration, University of Texas, Austin. He suggests a program including from two to four of the following objectives: (1) the provision of adequate teaching materials and equipment; (2) the adjustment of pupils by better grading and classification; (3) the development of professional reading among the members of the educational staff; (4) the improvement of school and home study habits.

"The personnel for carrying out this program is likely to be restricted to the superintendent, a limited number of principals and perhaps a few special supervisors," he continues. "A small system has certain advantages due to the comparatively small number of supervisors and teachers involved. The major work in planning the program of supervision in a small school system and a considerable part of its execution depend upon the superintendent of schools. To bring about a satisfactory standard of accomplishment necessitates deliberate planning in the organization of supervision. Provision must be made not only for setting

up proper objectives, but for the effective articulation of the different units of the educational program and for the proper coordination of parallel courses of study.

"By its very nature, supervision affects the entire school program, and its administration calls for definite prevision and annual planning on the part of the superintendent in charge. Insofar as the superintendent can delegate the personal supervision of instruction to capable subordinate officers and devote his time to other administrative duties it is well, but under the ordinary conditions that prevail in small cities it is more than likely that a capable superintendent may with advantage devote a part of his own time to supervision."

The Summer Health Round-Up of the Preschool Child

"It was due to the National Congress of Parents and Teachers that a plan on a national scale was worked out to make preschool children physically fit for school entrance through the summer round-up, which is now an annual activity of the Congress of Parents and Teachers," writes Dr. Blanche M. Haines, director, bureau of maternity and infancy, Department of Labor, in the *United States Daily*.

"In the summer round-up of 1930, forty-three states were represented with 1,919 groups carrying through the round-up. The number of children who entered school (kindergarten or first grade) in the fall of 1930 was 102,490. The number of children who received round-up examinations was 55,526. The number of defects discovered in the round-up examinations was 105,732, nearly two defects to each child examined. The number of defects corrected as a result of the round-up examinations was 28,505, approximately one-fourth of the number of defects discovered in the round-up.

"The number of 100 per cent children in the fall examination check-up was 10,484.

"More than 18,000 children were immunized against smallpox, nearly 10,000 were immunized against diphtheria, and more than 1,200 were immunized against typhoid fever.

"Yet of far greater importance than the actual numbers of children that had corrections and immunizations was the number of parents that received through the Congress of Parents and Teachers a greater sense of responsibility for the health of the preschool child and the use of measures to prevent disease with a widened vision of what 100 per cent health means for the little child.

"The 1931 summer round-up is now under way."

Cooperation: The New Tie Between Education and Industry

A practical example of what a carefully planned relationship between schools and business can mean toward helping the student decide on his life's work is presented in this study

By P. EVANS COLEMAN, Professor of Marketing, University of Detroit

BUSINESS education given in schools will more and more satisfy the demands of employers when schools and employers establish closer interrelationships.

The employment of a pupil brings to an employer an opportunity to study the school product, which he assimilates and continues to train.

In some sections summer work by high school pupils and college students is encouraged as a helpful experience toward preparing the prospective employee for his postschooling occupation. Such work should not be disparaged, but its casual, unsupervised nature, devoid of planning or continuity, ought to turn the attention of all who are interested in more practical education toward the various forms of cooperative business education, some of which include a five-year relationship between employer and school under a form of supervised employment.

Individual Experiences Were Studied

To discover the educational benefits of such training this study was made. It represents a follow-up for five years of a group of eighty-five Cincinnati youths who were graduated in 1924 from junior high schools that had no relationship with industry, in contrast with a five-year cooperative experience enjoyed by sixty commercial students at the University of Cincinnati, all of whom have since graduated with the degree of commercial engineer. These sixty sample cases were taken at random from the graduating classes for four years beginning with 1926. They form a substantial cross section of all the commercial graduates which to date number about 175 men.

The men were privately interviewed before and after graduation, and the questions asked covered a review of their personal experiences as cooperative students rather than any opinion about the plan in general. Specific answers were obtained in regard to the five-year sequence of their various

jobs, the time spent on each job, the goal reached at graduation or the job obtained at that time, the amount of tie-up, synchronous or deferred, between the job content and the curricular content during the five years, the vocational guidance contribution and the value of the alternating plan between school and work as an effective rhythm of training.

The manner in which both exploratory occupational experience and job development are enjoyed is illustrated by the following sample case, typical of the commercial men.

Lithographic Laborer 1.5 mos.	Bank Solicitor 0.5 mos.	Stock Clerk 2 mos. in 2 firms
Telephone Repair 1 mo.	Electrical Coil Work 6 mos.	Cost Clerk 2 mos.
Exploratory Summary:	3 occupations outside commerce 3 occupations within commerce 7 firms as employers	or a total of 13 months' work or 26 months' calendar time

Afterward this student decided to pursue cost accounting, and his sequence thereafter was as follows:

Material Cost Clerk 4 duties 9 mos.	Cost Clerk 3 mos.	Cost Summary Clerk 4 mos.
<hr/>		
4 duties		

Training Summary: 2 firms, 3 jobs in cost work, with a total of eight duties assigned him in 16 months.

The occupations followed by the men during the first year after their graduation disclose a wide

diversity among the special fields of commercial work. Nine are in promotional or sales work, nine are in accounting, one is an assistant advertising manager, one an advertising analyst, one a junior executive in purchasing, one an assistant treasurer and secretary, three are life insurance underwriters, one is a production engineer, one an assistant factory manager, one in foreign trade, one a junior executive in a stock and bond house, one a junior stock broker, two are junior traffic executives, one is an assistant credit manager, one a statistical market analyst, one an industrial economist, one a college instructor, one a results engineer, one an assistant commercial engineer and one an executive efficiency engineer.

The job sequences of these men during their training period were as follows: The junior stock broker began, when he was a freshman, as a laborer in a machine shop. He worked there three months. Then he operated a paper machine, and also did painting and varnishing jobs for an art publishing firm for three months. Next he served for six months as a shop clerk in the cost department of a nationally known electric firm, calculating time tickets and job orders, making time studies and assigning jobs.

He then entered a large stock and brokerage firm as a mail clerk, delivering transfers to banks for three months. For nine months he looked after trial balances and searched for errors in customers' accounts. He served as entry clerk on registered incoming mail for one month, later calculating and checking interest for brokers' and banks' accounts for one and one-half months. In his spare time he had begun to sell securities (he sold \$10,000 during his junior year) while at the same time he continued to work on the ledgers. In an emergency he helped in the statistical department for three and one-half months. One month before his graduation he became private secretary to the trading manager and partner of the firm, caring for his private clients, at the same time continuing to develop his own personal clientele.

Preparing for Accounting Work

One graduate who is installing accounting systems for a public accounting firm experienced the following work sequence as a student: He was a machine shop operator in a large adding machine factory for six months, after which he entered the planning department, making entries, filing stock control records and occasionally chasing stock. This he did for another six months. Then he went to the cost department for four months where he posted cost records and checked the pay roll. For five months he did cost finding, summarizing cost

records and pyramiding them, after which he was transferred to the sales department where he worked on sales statistics and corresponded with salesmen for five months. He was then sent back into the cost department where he assisted in the installation of a new system for two months, finally working on stock control inventory records for half a month.

A Sales Engineer's Experiences

A junior sales engineer spent eight months as an underclassman on various machines in a large machine tool factory. He next went to another firm in a similar line as a clerk in the stock room for seven months. From there he was advanced into the sales engineering department where he spent eleven alternate months on analyzing sales, examining consumer records and incoming orders and checking patterns. For five months he served as sales correspondent, a job that involved writing to retailers and manufacturers. After graduation, he remained with the same firm in advanced sales analytical and correspondence work.

The significance of the job progression hinges upon several factors. Practically it has to agree with the jobs proffered either to the man direct or to the college coordinator, the employment executive of the college. The need of those men who are undecided upon which of the twenty-five specialties in commerce to concentrate must be considered and the comparative opportunities investigated so that they may decide upon a specialty and start training for it as soon as possible. In the first case already described, the student enjoyed a progressive sequence over the entire time left in his course after he reached his decision to concentrate upon cost accounting. A few of the men never did decide upon a specialty during the five years, and these might be termed the developmental cases, for the curricular subject matter and the job experiences might be credited with carrying the men on towards greater maturity, adding to their background, with a definite decision to be made later.

The first case mentioned belongs to a group of eight men who virtually spent the first two and one-half or three years in a survey of the entire commercial field through jobs similar to the ones cited and through student conversations, work observations and coordination classes, all of which contributed to the final decision upon the specialty. Thenceforth, they directly or indirectly charged the college with the functional duty of providing, if at all possible, some specialized training with an employer in their adopted line.

Few of the men were ready to make a decision about their specialty the first or second year, a few more the third and fourth years, while most

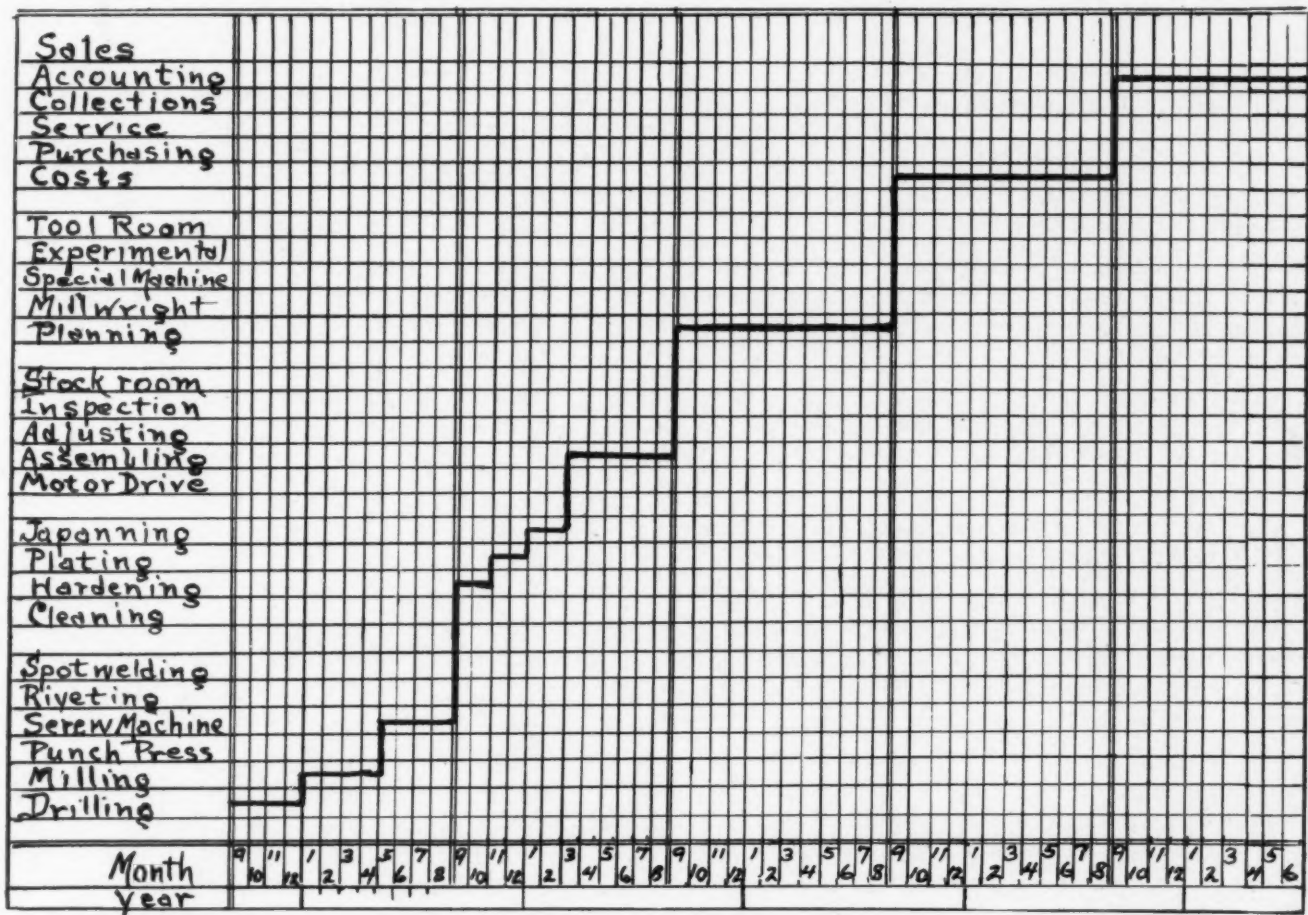
of them had made a fairly definite choice by the time of graduation. A few, however, remained undecided, which meant that they would evaluate their college course as a developmental one.

For the entire group of sixty men, the jobs averaged 6.8 months before a change was made, and the number of employing firms during the fifty-five months was on the average 3.3.

How much, if any, excessive time is spent on the various jobs in the training progression after the

where collegiate cooperative commercial training is offered, as at New York University, the Georgia School of Technology, Drexel Institute, the University of Akron and Northeastern University.

How much reenforcement from the training point of view comes from teaching subject matter that relates to the various jobs at hand is an interesting question, since so much of the material taught in schools of business administration appears to possess only an indirect application.



This chart illustrates the University of Cincinnati's method of recording the progress made in employment by commercial cooperative students.

occupational choice is made? This is a difficult question to answer.

As every personnel man has discovered, an employer, no matter how generous he may feel (and the Cincinnati employers have increasingly cooperated with their university) must often make any scheme desirable for the promotional welfare of an individual employee fit with his firm's financial demands for productive and frequently highly repetitive results.

But the progression through the various jobs provided these cooperative course men has been so successful that high school graduates everywhere should feel envious of the chance incoming freshmen have at this college and others similar to it,

In the Cincinnati plan there is a considerable tie-up. Of course, until these undergraduates have decided definitely upon what specialty to concentrate, this coordination is not of great importance and the results are vague. After they have decided, it is of prime importance, since, insofar as the subject matter directly and indirectly feeds the employer-job-sequence in the student's occupation, the college course is really functioning vocationally. Otherwise the subject matter must be charged up to cultural or exploratory aims, if its retention in the curriculum is to be validated.

How can this coordination be measured? The students' own estimates after their graduation have been used to make an evaluation. The corre-

lation is of two kinds. When it comes in the same year, as it frequently does, it may be styled synchronous or concurrent. When the job and the subject matter fit into the other at a remoter date, it may be called deferred coordination of the first, the second or the third year.

The following case is illustrative: A. K. determined upon selling, commodity undecided, in his second year. He had some department store sales work in the third year, and a marketing course in the curriculum during the alternate months. Upon his graduation, he entered life insurance sales. He estimates his correlation as follows: synchronous coordination, 6 per cent of the total course hours; one-year deferred coordination, 10 per cent; two-year deferred coordination, 6 per cent; three-year deferred coordination, 5 per cent. The unweighted coordination for the entire course was 27 per cent.

In the case of the junior sales engineer whose record has already been given, his synchronous correlation amounted to 20 per cent of his course, with the following deferred: one-year deferred coordination, 4.5 per cent of the total course hours; two-year deferred coordination, 7 per cent. This made a total of 31.5 per cent (unweighted) for the entire course.

The stock broker's experience was as follows: synchronous coordination, 13 per cent of the total hours of the course; 1-year deferred coordination, 10 per cent; 2-year deferred coordination, 16 per cent; 3-year deferred coordination, 2 per cent. This made a total of 41 per cent (unweighted) correlation between job and curricular content.

The accountant who, upon his graduation, entered a public accounting firm to install systems among clients had the following tie-up: synchronous coordination, 12 per cent of the total hours; one-year deferred coordination, 16 per cent; two-year deferred coordination, 7 per cent; 3-year deferred coordination, 6.5 per cent. This made a total of 41.5 per cent of correlation for his course.

How Subject Matter Was Analyzed

Another approach as to how much the subject matter contributed to the occupational training in the Cincinnati course was made through the use of the jury method. For example, the nine men of the sixty cases studied who entered accounting, were segregated into subclasses, public accounting, bank accounting, small proprietary accounting, cost accounting, manufacturer accounting and merchandise accounting. Then three mature accountants were asked to weigh on a scale from 0-10, the forty or more separate courses in the five-year program according to their respective contributions to the occupations mentioned. The result was 45 per cent in the first field, and so on.

From either type of analysis, the direct functioning of the cooperative course, such as is administered at Cincinnati, is notable in the bearing it has on the occupations for which the men train themselves.

Other educational aspects, such as the quantity spread of the men over the whole range of commercial employments, the specific vocational guidance provided, the mental hygiene results from the alternation between classroom work and employer-jobs and its implication as a rhythmic force, remain to be investigated further.

Can the Results of Supervision Be Measured?

That objective scientific measurement of the results of supervision must continue, is the contention of J. H. McGaughy, professor of education, Columbia University. An accurate evaluation of certain phases of supervisory programs can be obtained in no other manner.

But this method of attack has serious limitations and weaknesses, he holds. Many desirable changes in pupils and in teachers are so vague and intangible that they are not measurable at the present stage of scientific development in education. To measure the results of supervision objectively is one step more difficult than measuring the results of teaching, and no scientific worker has yet been able to measure completely and accurately the results of teaching.

"Because of the inherent difficulties and weaknesses of objective measurement of accurately controlled variables in supervision, the case study method must be accepted as one of the most satisfactory means of evaluating supervision," he points out. "The results of such study must be subjective, to be sure, and not conclusive in the narrowly scientific sense. But we propose that for many years to come studies of this type will do as much to facilitate progress in sound supervision as will truly objective studies.

"Two styles of case studies are in use. Each serves a distinct function in the evaluation of supervision. One type sets forth the setting and procedure and apparent outcomes of a supervisor's work with an individual teacher who is facing a specific problem in her classroom. The second type of case study is the initiating and carrying through of a supervisory program for a whole school system. These two types of studies should be used to an even greater extent in supplementing the more narrow and restricted conclusions of truly scientific studies."

Are Public Address Systems Broadening Education?

Forty school men, from first-hand experience, tell what they think about radio and sound equipment and how it is or is not aiding them in their educational programs

By GRAYSON N. KEFAUVER, Associate Professor of Education, and H. C. HAND, Assistant in Secondary Education, Teachers College, Columbia University

THE large claims made upon the time and energy of school principals make it important for these executives to be alert to new devices and techniques that will enable them to administer their schools more effectively. Considerable help in this direction has come through the utilization of different types of electrical equipment. Certain kinds of electrical devices,

Robert L. Cooley, director, Milwaukee Vocational School, addresses his teachers and pupils while sitting at his desk.

such as program systems, clock systems, fire alarm systems and telephone systems, have been in fairly general use in the schools for a number of years and are now regarded by school administrators as indispensable.

A relatively new type of electrical equipment that has been installed in some schools is the "public address system." This includes various types of central distribution systems in which provision



TABLE I—SCHOOLS REPORTING THE USE OF PUBLIC ADDRESS SYSTEMS

Type of School	Enrollment of School				Total
	Below 500	500 -999	1,000 -1,999	2,000 and above	
Elementary school		8	3		11
Junior high school	2	3	2		7
Senior and four-year high school	2	7	1	1	11
Elementary and junior high school			1	2	3
Trade school		1		1	2
Elementary and high school	4		1	1	6
Total	8	19	8	5	40

is made for transmitting sound from a given place or places to any or all other points in the school plant. All of these systems include a central radio receiving unit, usually in combination with a phonograph. In schools in which these systems have been installed, there are one or more microphones located in various places—the principal's office, the superintendent's office, the auditorium stage or the radio or special broadcasting room—by means of which speech or music may be distributed and released through the loudspeakers with which the classrooms, the offices, the auditorium, the gymnasium, the cafeteria and the corridors are equipped. Manipulation of the controls of the switchboard makes it possible to limit the reception of radio programs, phonograph recordings or speech to any given point or to make such programs available to the entire school.

Somewhat extended claims have frequently been made for the public address system. The following statements are quotations adapted from a number of advertisements that have recently appeared in educational periodicals of wide circulation: "In the auditorium . . . the faintest whisper from the platform is audible everywhere. Pupils enjoy assemblies. They hear and gain the full benefit of words of wisdom . . . there is no bored shuffling of feet . . . even the mild voiced speaker receives respectful attention. All classrooms are within whispering distance of the principal's office. Daily bulletins or a few words from the

distinguished visitors are delivered . . . to every pupil, without assembly. The athletic instructor orders windows up, and conducts exercises for all simultaneously.

"What can be more to the point than, during music hour, to play records or to pick up from the air the notes of great ones, illustrative of the course? Now . . . you can have a great orchestra playing in every classroom at the same time. The electric phonograph pick-up furnishes music for assemblies and class plays and also for physical instruction in the gymnasium or in classrooms. History, music, geography, civics, economics and the sciences are discussed over the air. The . . . system provides needed supplementary material for classroom work, helps the pupil to concentrate, stimulates interest in school work, broadens the pupil's outlook.

"Our . . . system makes it possible for the teacher to let pupils hear national explorers and educators to-day. To-day . . . every pupil can attend important sessions . . . can hear the great ones speak. These instructive talks fit into existing courses and stimulate interest. The necessity of a central sound installation system is now regarded as essential to a school of any standing. It is a safety measure for directing pupils in case of fire, a convenience to the office in delivering messages and announcements, a call system and a means of putting all parts of the auditorium within whispering distance of the platform. A

TABLE II—WHERE THE MICROPHONES WERE PLACED

Location of Microphone	Enrollment of School				Total
	Below 500	500 -999	1,000 -1,999	2,000 and above	
Principal's office	(8)	(19)	(8)	(5)	(40)
Superintendent's office	4	17	7	3	31
Auditorium stage	4	3	1	1	9
Operating or radio room		3	2	1	6
Cafeteria		2	2	1	5
Variable location		1			1
	2	2	1	2	7

school without a sound system will soon be obsolete."

These claims are suggestive of the uses for which public address systems may be employed. It is important, however, that disinterested evidence be obtained on the uses and effectiveness of the systems that have been installed. While objective evaluation is needed, the reactions and judgments of principals who have used a public address system should be of large significance in appraising this new instrument. The lack of evi-

dissatisfaction with the results. Two follow-up communications were employed in making the canvass. From the forty-five schools known to have public address systems of the type already defined, forty usable replies were received. No reply of any sort was received from thirteen of the schools included in the original mailing list. Whether or not these schools were equipped with public address systems is not known.

The forty usable replies were supplied by schools in eighteen states. Ohio, with ten schools,



A group of sixth grade pupils of Shelby, Mich., take their calisthenics to the music of the radio.

dence on the use and effectiveness of public address systems and the generous claims of distributors are responsible for this study.

In this investigation, an attempt was made to discover and canvass all high schools in the United States that were equipped with public address systems. Preliminary forms of inquiry were sent to the state departments of education in each of the forty-eight states and to each of the electric supply or appliance concerns advertising public address equipment in educational periodicals. This was done to obtain a list of the schools having a public address system. Each school on the list was approached with a relatively extended check list designed to obtain a description of the equipment, an enumeration of the uses made of the public address system and of the frequency of these uses and an estimate of the degree of satisfaction or

had by far the largest representation. Although only a study of secondary schools was contemplated at the outset of the investigation, it can be seen from Table I that practically all types of schools were represented in the canvass. In most cases, the information supplied by state superintendents and by electrical supply concerns was of such a nature that it was impossible to determine in advance the types of schools that were being approached.

Although the schools included in the canvass fall into six different classifications, the representatives of two types—elementary schools (11) and senior and four-year high schools (11), comprise slightly more than half the total number. Of the total number, all but one were public schools and all but two were coeducational.

A large variation exists in the public address

TABLE III—PERCENTAGES OF CLASSROOMS EQUIPPED WITH LOUDSPEAKERS

Percentage of Classrooms Equipped With Loudspeakers	Enrollment of School				Total
	Below 500	500 -999	1,000 -1,999	2,000 and above	
100	6	13	5	3	27
90 - 99		1			1
80 - 89		1			1
70 - 79	1	1	1		3
60 - 69			1		1
50 - 59		2			2
Below 50	1	1	1	2	5

TABLE IV—ROOMS OTHER THAN CLASSROOMS EQUIPPED WITH LOUDSPEAKERS

Name of Room	Enrollment of School				Total (40)
	Below 500 (8)	500 -999 (19)	1,000 -1,999 (8)	2,000 and above (5)	
Auditorium	6	15	7	3	31
Gymnasium	6	12	6	3	27
Principal's office	3	11	6	2	22
Library	4	5	3	3	15
Cafeteria	1	4	2	4	11
Teacher's room	1	4	1	1	7
Superintendent's office	4	1			5
Other rooms		5	1	3	9

systems installed. These differences are found in connection with the number and the location of microphones, the location of switchboards, the types of loudspeakers employed, the number of rooms other than classrooms equipped with loudspeakers, the proportions of the total number of classrooms equipped with loudspeakers, the number of rooms requiring two or more loudspeakers and the number of buildings served by the public address system. The characteristics of the systems used will be presented before the uses made of them are discussed.

Only through the use of the microphone is it possible for the public address system to be used in transmitting announcements, bulletins, talks, messages, calls and directions for setting up exercises and fire drills. Since the microphone is one of the most expensive items of equipment, it is interesting to know that of the schools having public address systems, nearly three-fourths (28) were equipped with but one microphone. No school having an enrollment of less than 500 reported more than one of these instruments, while two or more were used in all but one of the schools having enrollments of more than 2,000.

The location of the microphone will condition

the number and variety of uses that may be made of the public address system. Announcements, speeches, talks, bulletins and directions may be satisfactorily transmitted when the microphone has a fixed location, such as, for example, in the principal's office or the superintendent's office. The distribution throughout the school of the efforts of glee clubs, orchestras, bands and debaters requires, however, that broadcasting be done from a room or rooms especially adapted for these purposes. In this connection, Jarvis says: "It may be desirable to have more than one microphone and connections in various places, such as auditoriums, gymnasiums and elsewhere, where they may be connected into the circuit. It may be practicable to buy a portable microphone."¹

That a few of the schools had microphones in two or more different places is shown in Table II. By far the most popular location was the principal's office. In only seven of the forty schools was it possible for the microphone to be shifted to any classroom or other room in order that speech or music produced there might be transmitted to other portions of the school building.

¹Jarvis, E. D., *Equipping the School for Radio Reception*, the American School Board Journal, 82:2, February, 1931, p. 61.

If the broadcasting of debates, discussions, radio dramatizations, selections by bands, orchestras, glee clubs, choruses and the like, results in worthwhile educative experiences for pupils it is evident that approximately four-fifths of these schools are not equipped to make the fullest possible utilization of their public address systems.

It is through the manipulation of the controls in the switchboard of the public address system that the distribution of sound may be limited to a single room or extended to any number of rooms in the building. When contact by means of the public address equipment is to be made with a given group or groups of pupils without disturbance to those in other classrooms, it is desirable if not imperative that the switchboard and the microphone (or one of the microphones) be located in the same place in the building.

All of the twenty-eight schools that were equipped with but one microphone reported that the switchboard and the microphone were in the same office or room. In all of the schools that

reported two or more microphones, the switchboards were near one or the other of the microphones. Only two of the forty schools were equipped with more than one switchboard, both reporting two. In these two schools switchboards were so placed that they could be operated by individuals seated or standing before one or the other of the microphones.

The question of whether or not school plants composed of two or more buildings can be served satisfactorily by the public address system is probably one of some importance to certain school administrators. Significant evidence on this point was brought to light by this investigation.

Slightly more than one-third (14) of the schools reported two or more buildings. No evidence was submitted by any school to prove that plants comprising two or more buildings could not be served satisfactorily by the public address system. On the contrary, it is apparent from the information set down on the returned forms of inquiry that sound equipment has been effectively used in

TABLE V—WHAT PUBLIC ADDRESS EQUIPMENT COST

Total	Enrollment of School				Total
	Below 500	500-999	1,000-1,999	2,000 and above	
Below \$500	3				3
\$ 500- 999		8			8
\$1,000-1,499		2	2	1	5
\$1,500-1,999	3	2			5
\$2,000-2,999	2	1	1		4
\$3,000-3,999		3	2	1	6
\$4,000-4,999				1	1
\$5,000-and above.....		2	2	2	6
No reply		1	1		2
Total	8	19	8	5	40
Median Cost	\$1,675	\$1,125	\$3,000	\$4,500	\$1,800

TABLE VI—RELATIONSHIP BETWEEN COSTS AND NUMBER OF LOUDSPEAKERS

Cost	Number of Loudspeakers					Total
	Below 20	20-39	40-59	60 and above	No reply	
Below \$1,000	8	3				11
\$1,000- 1,999	3	4	3			10
\$2,000- 2,999	2	1	1			4
\$3,000- 3,999		3	1	1		5
\$4,000- 4,999		1			1	2
\$5,000 and above.....	1		1	3	1	6
No reply					2	2
Total	14	12	6	4	4	40
Median	\$850	\$1,750	\$2,000	\$5,450		\$1,800

TABLE VII—WHO BUYS THE SCHOOL PUBLIC ADDRESS SYSTEMS

Source of Funds	Enrollment of School				Total
	Below 500	500 -999	1,000 -1,999	2,000 and above	
School board	4	7	2	4	17
Student group	2	4	3		9
School board and student group		1	2		3
Parent-teachers association	1	2			3
Parent-teachers association and school board ..		2			2
Parent-teachers association and student group ..		1		1	2
Other combinations		2	1		3
No reply	1				1

these schools. The greatest number of uses (28) for which the public address system was employed in any of the forty schools was reported by one of these fourteen institutions. The median number of uses (13) was likewise discovered to be slightly above the similar measure of central tendency (11) reported by schools housed in but one building. All uses made of the equipment in the fourteen two or more unit plants were found to have an average rating closely approximating "very satisfactory."

In eleven of the fourteen two or more unit school plants the public address system was in use in all buildings. One school reported that seven out of nine buildings were equipped. Another indicated that the system was installed in three out of four buildings. The remaining school did not state the total number of units in the plant.

Much of the dissatisfaction resulting from the earliest experiments with sound distribution systems in schools was due to the fact that the loudspeakers with which these installations were equipped were not capable of producing a quality of tone that was full, rounded and convincingly lifelike. Jarvis has pointed out that schools cannot be satisfied with loudspeakers "which will not register low tones, both musical and spoken, and higher vibrations, with absolute accuracy. Musical instruments, singing, and ordinary speaking voices should sound entirely natural. Each instrument of the orchestra ought to be quickly discernible, and every note of the piano should come from the loudspeaker, full-toned, vibrant and clear." Pupils are not likely to give serious attention to either speech or music which comes to them over loudspeakers that noticeably distort the sounds being transmitted.

Of the two types of loudspeakers, the magnetic and dynamic, that are of practical importance for school installations, Blom favors the latter type. Concerning the merits of the dynamic loudspeaker he says: "Both low and high frequencies can be reproduced if proper baffles are provided. The

problem of getting sufficient power into the speaker over the whole frequency range is simplified because the impedance (apparent resistance to an alternating current) does not change greatly with the frequency. Great volume can be obtained when the speaker is fed from a sufficiently large power amplifier. A dynamic speaker has a high load capacity without serious distortion. This means that the speaker can handle a large amount of power without any serious changes taking place in the waves as they pass through it. It is extremely important that distortion be kept at a minimum if the sound output from the speaker is to be like the sound impressed upon the system."¹ Jarvis, however, does not appear to believe that the dynamic loudspeaker is markedly superior to the magnetic type for general use in the schools. He says that the performance of the former "is not noticeably superior" to that of the latter.

In view of these conflicting statements, it is well to inquire as to the types of loudspeakers with which the schools included in this canvass were equipped and to attempt to discover whether or not either type proved distinctly more satisfactory than the other.

Of the 1,029 loudspeakers that were in use in the thirty-six schools from which evidence on this point was obtained, 871 were of the magnetic type and 148 were of the dynamic type. Schools that were equipped with magnetic type loudspeakers reported uses equally extensive in number with those that employed the dynamic loudspeakers exclusively. No evidence was found to support Blom's contention that the dynamic is the more satisfactory type of loudspeaker. One of two things is apparently true—either the principals of these schools were relatively uncritical of the performance of magnetic type speakers, or else the magnetic type speakers really were capable, as suggested by Jarvis, of transmitting speech and

¹Blom, E. C., *Radio and Electric Power Supply Equipment for Schools*, Bureau of Publications, Teachers College, Columbia University, New York, 1930, pp. 43-44.

music without noticeable distortion of the sound.

Fifteen schools were equipped with various combinations of both types of loudspeakers. When used in combination, the magnetic type speakers usually far outnumbered those of the dynamic type, the latter being largely if not exclusively employed in auditoriums, gymnasiums, libraries and cafeterias, while the former were more commonly used in classrooms.

Utilizing the Equipment Fully

The public address equipment cannot be fully utilized unless all home rooms, and all or practically all classrooms are equipped with loudspeakers. Among the possible uses of the system which would be to varying degrees impossible in schools only partially equipped in this respect are the following: direction of fire drills, radio programs transmitted for classroom work, phonograph recordings transmitted for special phases of classroom work, daily bulletins distributed to all pupils, announcements or messages transmitted to the entire student group and talks or speeches distributed throughout the school without assembly.

In the light of these considerations, it is of importance to discover what, if any, relationships existed between the extent of use, the importance of the contributions made by the public address system to the general administration of the school and the percentage of classrooms equipped with loudspeakers.

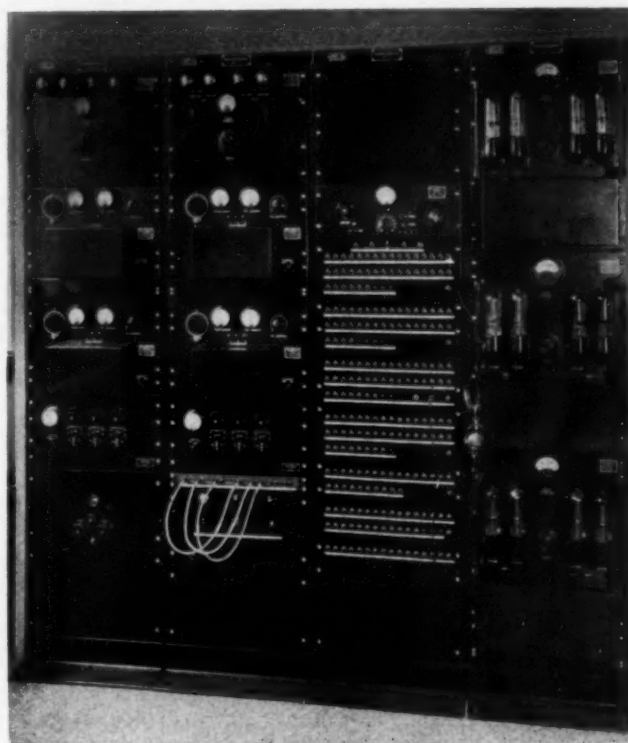
In nearly three-fourths (27) of the schools, all of the classrooms were equipped with loudspeakers. These schools reported a median of thirteen uses for which the public address system was employed while the similar measure of central tendency for schools with less than 70 per cent of the classrooms equipped was eight. This supports the observation that failure to equip all or nearly all of the classrooms results in a limited utilization of the system.

None of the thirteen principals representing schools without a speaker in every classroom rated the public address system as having made a "very large contribution" in the administration of their schools, while all of the twenty-seven administrators with a speaker in every room indicated this highest rating. The only principal who indicated "no significant contribution" was one representing a school in which but one-third of the classrooms had been supplied with loudspeakers. Five of the principals in partially equipped schools either gave no reply or said that the system had made but a "small contribution."

Certain of the principals of partially equipped schools submitted comments on the margins of the form of inquiry to the effect that completely satis-

factory utilization of the equipment was impossible without complete loudspeaker equipment and that unequipped classrooms were being or would soon be supplied with loudspeakers. Similarly, certain rooms other than classrooms, such as the auditorium, the gymnasium and the cafeteria, should be supplied with loudspeakers if the largest possible contributions are to be made by the public address equipment in the administration of the school. A summary of the practices in this regard as revealed by the forty returned forms of inquiry is presented in Table IV, which appears on page 56.

Every school had one or more rooms other than classrooms equipped with loudspeakers. The numbers of such special rooms varied from one to eight for each school, the median number being three. In general, the number of such special rooms equipped with loudspeakers increases with the size of the schools. Among the rooms infrequently served by the public address system are



This is a typical control board for a centralized sound system.

the playroom, the dean of girls' office, the registration room, the conference room, the corridors and the secretary's office.

Certain of the special rooms, such as the auditorium, the gymnasium and the cafeteria, present special problems in the installation of a public address system. These rooms are sometimes so large that it is difficult to make clear-cut, undistorted speech or musical tones available to all parts of the room. Not infrequently it has been

found necessary to install two or more loudspeakers in some of these special rooms. Of the schools that were so equipped no school had a classroom having more than one loudspeaker. Only sixteen of the forty schools had any room or rooms in which more than one loudspeaker was installed. Of the twenty-eight rooms reported, twenty-one were equipped with two loudspeakers. One large school had eleven loudspeakers in the gymnasium and thirteen in the auditorium. No other school reported more than five loudspeakers in any one room.

The question of cost is one that is certain to be raised early in a consideration of any type of school equipment. Table V summarizes the total costs, inclusive of installation, of the public address systems in the forty schools.

How the Cost Varied

The total costs of the public address systems were found to range from \$250 to \$8,200. As indicated by the medians reported in Table V, the cost of public address equipment was closely related to the size of the school, undoubtedly because greater numbers of loudspeakers are required for schools of larger enrollments. Wide differences in the costs of the equipment within each of the four school size groups were evidenced by the ranges, which were, in the order of increased enrollment, \$250 to \$2,500, \$515 to \$8,000, \$1,000 to \$5,686, and \$1,200 to \$8,200, respectively.

Since it has been proved that some relationship does exist between school size and the total cost of public address equipment, further evidence discloses the fact that a closer relationship exists between the total cost of the equipment and the total number of loudspeakers employed. This is shown in Table VI.

The total number of loudspeakers reported ranged from five in a partially equipped school of less than 400 pupils to 210 in a school of large enrollment in which all classrooms, all offices, the corridors, the gymnasium, the library and the auditorium were all included in the public address hook-up.

Many of the electrical devices that are now commonly regarded as necessary items of equipment came into the schools largely through some agency other than the board of education. In a great many cases, and particularly in the smaller cities and towns, the installations of program systems, clock systems and the like were made possible by funds raised through the combined or separate efforts of pupils, parent-teachers associations, teachers' leagues or private citizens of the community. That a somewhat similar circumstance exists in the raising of funds to purchase public

address equipment is evidenced by the data presented in Table VII.

Although only approximately half of the schools reported that the school board had had anything to do with the raising of funds, it was evident from communications that accompanied the returned forms of inquiry that these groups are in many instances recognizing the possibilities of the public address system. It was not uncommonly reported that new buildings or new additions to old buildings had been wired for public address equipment at the time of their construction. Blank returns were submitted by certain schools with the comment that the installation of the sound system was under way, was soon to be undertaken or was being contemplated by the board of education.

It was discovered from an analysis of the returned forms that the method of installing the public address equipment varied somewhat among the forty schools. Thirty-one principals reported that it was purchased complete from some company or dealer and was installed by the firm or dealer. In six of the schools, the equipment was purchased in parts and installed as a project by the members of the industrial arts or science classes. Three other schools also bought their equipment in parts. In one the installation was made under the direction of the industrial arts instructor; in another the principal made the installation himself.

In approximately four-fifths (33) of the forty schools the action for the installation of the equipment was initiated by either the principal (11), the superintendent (9) the school board (5), the superintendent and the principal (3), the principal and the teachers (3) or by a combination of principal, teachers and pupils (2).

(To be continued)

Teaching Manners and Morals to the Children of California

A dormant state law enacted in 1887 has been revived and will be used as authority for teaching California children manners and morals and the effects of alcohol and narcotic drugs on the human system, according to Vierling Kersey, state superintendent of public instruction. A teachers' manual is being prepared.

The 1887 law provides that: "Instruction must be given in all grades of school and in all classes during the entire school course in manners and morals, and upon the nature of alcohol and narcotics and their effects on the human system, as determined by science."

What High School Graduates Can Expect of the University

Training to the full extent of their capacity, understanding of their background of training, sympathetic guidance—these things high school pupils expect and the college must not disappoint them

By FRANK L. EVERSULL, Principal, East St. Louis High School, East St. Louis, Ill.

THE development of American education is one of the romantic chapters in the history of the advancement of civilization. Its genesis can be found in the religious fervor of the Puritan fathers. Its early career was influenced by Harvard and Yale.

The Latin grammar school opened the episode of secondary education. The academy grew out of the creative genius of Benjamin Franklin. The high school, the junior high school, the junior college, preschool training, the kindergarten and the modern university have been the accomplishments of three centuries. Barnard, Mann, Eliot, Harper, Dewey, Judd and Thorndike are names that have been indissolubly linked with the modern chapter of this romance of education. The present situation is the result of these early factors.

The Need for Reorganization

This era is characterized by unprecedented increases in enrollment in all school enterprises, the liberation of children from productive economic callings, the increase in per capita wealth, the influence of science on the learned professions, the legal requirements for entrance into many vocations and the increased desire on the part of the people for education. These indicate a need for the reorganization of the educational program of our nation. The development of this program has been phenomenal. The urge of the machine age and the economic improvement of the masses together with legal enactments relative to compulsory attendance and child labor have made schooling almost universal. In spite of all these changes, however, the higher the grade of school work, the more selective its character remains. The doctrine of formal discipline still holds sway. The ratio of failure remains high. The philosophy of education has perpetuated the traditions of the first two and a half centuries of

the history and development of public education in America.

In the last decade of the nineteenth century the leaders in education began to campaign actively against the rigors of the educational program that had accumulated through the years. The voice of such a leader as Pres. Charles W. Eliot of Harvard University was raised in protest against the waste of time and the poverty of the materials of education. Out of his vocal protest came the work of the Committees of Ten and Fifteen. In the wake of these reports was born the junior high school, designed to bridge the gap between elementary education and secondary education. It was to broaden and enrich the offerings of the school and to hasten the progress of the pupils. Little did these fathers of modern education realize that the addition of another enterprise would lessen the articulation. Instead of one break there were now two. Then the anxious proponents of the newer education added the junior college with its additional break. There remained the senior college, the university and the professional schools. Techniques of teaching and administration were evolved. Philosophies of education were formulated. Building programs were projected and the twentieth century was plunged into the greatest educational project for universal training that the world has ever known.

Why Articulation Is Necessary

But behind all of this was the factor that is most frequently neglected in the formulation of policies, philosophies and plans. That factor is human nature. The specialization of leaders, the increase in scientific literature on management and administration, the added knowledge of psychology of childhood, adolescence and teaching and the separation of the workers in the various fields of education decreased the articulation between the many separate enterprises of public

education. The higher schools made a conscious attempt to dominate the next lower school. Cross-purposes and bitter feuds sprang into existence, accompanied by vigorous and acrimonious disputes. Accrediting agencies composed of men trained in other days and with ideals, philosophies and programs of another generation dominated the situation. As a result the hiatus between each type of school was widened, newer and private school enterprises came into being and the field was cluttered up with a multiplicity of objectives and a divergence of opinions.

As we enter the second third of the present century we come face to face with the all important question of articulation. The Seventh Yearbook of the Department of Superintendence is evidence of the problem. The platform of teachers' meetings is replete with practical discussions of the question. The literature of the scientific study of education is making heroic efforts to articulate the efforts of teachers and administrators on all levels of educational endeavor.

Considering the Pupils' Rights

The rights of the pupils must be considered in a democratic society. Pupils have certain expectations that must be met. Articulations must be made between the high school and the college. There are rights of pupils that must be respected and privileges of colleges that must be considered.

The day of high-handed flunking must cease. With the expansion of the world's fund of knowledge greater election opportunities must be allowed. With the contributions from the research of the experimental laboratory and the psychologist's laboratory a program of guidance is demanded that must not go unheeded. With the increased powers of taxation for public education, the additional support of private education, the growing willingness of the people to pay the bills, the next higher school must accept the responsibility for educating the pupils sent to it from the next lower institution when ability to do such work is indicated. The different school enterprises must unite their efforts to understand each other's problems. As a result of this understanding the selective character of secondary and higher education must disappear and the schools must accept the mandate of the people of the various states that there shall be free public education on all levels for all of the children of all the people. This is the keynote of modern education in America in 1930.

The high school graduate has a right to expect the college to understand the work that legal enactments, social progress, scientific research,

local demands and the interests, capacities and abilities of pupils have imposed upon the program of secondary education. The purpose of the high school is as unique in the training of the adolescent as is the work of the college. Its purpose is not essentially to do things that will make college teaching easier. The principle of social utility is becoming more and more potent as the guide in curriculum construction. The college entrance examination, standing in class, intelligence quotients and other artificial measures are secondary to the whole program of high school training. These facts are fundamental to an understanding of the question of articulation. Brigg's discussion at the Atlantic City meeting of the Department of Superintendence is an adequate statement of this. He said:

"When every school formulates a program that will aim primarily at making each pupil, whatever his native abilities, his interests, and his aptitudes, better in such ways that he is a more effective citizen, then the problems of articulation will be simplified, for all will be working at various maturity levels toward common objectives, and each will recognize the wisdom and necessity of building on what the preceding unit has achieved."¹

Unless those who teach college classes recognize the validity of the products of scientific research in the field of education it must follow that all advances made below the college level will count for little when the pupils enter college. The history of the contributions of the scientific study of education is replete with changing conceptions of secondary education. Our modern high school is no longer a Latin grammar school, an academy or an institution whose sole purpose is to train pupils for language, mathematics and science courses in college. What we have to-day is a cosmopolitan high school.

The Principles of To-Day's Education

Single courses of study have given way to a multiplicity of subjects, and an elective system has reduced the number of constants to a minimum. Freedom and democracy in administration have taken the place of the autocratic machinery of the past generation. The doctrine of formal discipline has been replaced by the newer findings of psychology; the older days of memorization have gone, and the program of studies, richly loaded with languages and mathematics, is almost a thing of the past. The schools of to-day are not the schools which trained the present generation of college teachers. These situations led Briggs

¹Briggs, Department of Secondary School Principals, Proceedings of the Atlantic City Meeting, Department of Superintendence, 1930, p. 180.

to say, "There is urgently needed a better understanding by teachers on each unit of what is being attempted and accomplished below and above, and this will be increased by conference, exchanges of visits or of teachers, supervisors and similar practices."

These factors are all contained in the philosophy of modern secondary education. The work of Dewey, Cubberley, Judd, Thorndike, Briggs, Koos, and a host of others is discovering the nature and the extent of high school work and is remaking the whole program of secondary education. Researches in methods of teaching, how children learn, the sociologic values of subject matter, the nature and content of curricula and the effects of physiologic and intellectual factors on schooling are embedded in this philosophy. The results have been an increased holding power of the school, a more effective program of education, graduation at an earlier age, diversified schedules of training, revaluation of credits, introduction of new subjects, elimination of much of the subject matter of other days and a general improvement of the work of the school. College teachers must understand these findings of scientific study and must adapt their program to the students who are seeking admission.

Why the College Freshman Suffers

The confusion that has arisen from an utter lack of understanding has wreaked its vengeance on those who were utterly blameless, the college freshmen. It is a mistake to blame this innocent product of a modern situation for training that should be laid at the door of the offending high school teacher and principal. The unnumbered failures who have been denied the privileges of a college training because of the failure of the college to understand the work and the philosophy of modern secondary education are mute witnesses to the lack of articulation and sympathy that should exist between the members of two institutes founded for the common purpose of education.

Every high school graduate has a right to expect guidance from the college that he attends. This service is now accepted as fundamental to a functional program of secondary education. The child has been directed in his school work. Elaborate machinery has been set up to make his high school career successful. His immature judgment, his maturing instinct, his social, educational and moral ideals have been shaped and trained according to a scientifically planned program of guidance. Freshman days should postulate a continuance of this program.

It is an axiom of this theory that passing from

one institution to another, a mere matter of days, should not mean a complete let down of this guidance function of education. There is still much unexplored territory in the region of guidance. In spite of the many books and directions about study methods and study habits there is still much that is unknown about teaching students to study. While some beginnings have been made in vocational guidance there is still much to be known. Some progress has been made in adapting the instruction in the high school and the lower schools to meet the interests, aptitudes and capacities of each pupil. A conscious effort has been made to break up a lock step program of education. Scientific studies give objective evidence of mental, social and physical requirements for many callings. The high school has gone some distance in applying the findings of science to its procedures. But this must not be the end. In addition to the immaturity of later adolescence there are the new-found freedom of the first trip away from home and the first experiences away from the restraining influence of father and mother. Here is the college's supreme opportunity for the application of a dynamic and functional program of educational, social and moral guidance.

With the increasing enthusiasm for popular education, with the legal restrictions that are placed upon child labor and school attendance and with the increased efficiency of the lower school enterprises, the day is not far distant when attendance at college in the freshman year will tend to increase to the saturation point. The day will soon come when almost every pupil who is a high school graduate and who is capable of doing advanced work will apply to the college for entrance. Of course the first objection that will be raised is that there is insufficient room. If the public continues to be willing to foot the bills of education then the colleges will have to enlarge their plants and increase their equipment.

Adapting the Curriculum to the Need

The question of standards is always with us. Can the colleges take all of the children of all the people without lowering the standards of the A.B. degree? Here is the crux of the matter. The high school has had to adjust itself to meet the increasing compulsory enrollment. It has had to adapt its program to meet the needs of all the children of all the people. Who can say that its standards have been lowered? This challenge has improved the technique of instruction by making it necessary to get better teachers and to select the subject matter according to scientific study by a functional program of guidance. These were the high school's tasks. It has risen to the emer-

gencies of the hour and there is great promise that it will succeed. In like manner the college will have to break away from the traditions of an outworn psychology and the restrictions of ancient precedents and adapt the instructional programs to the needs of a great democracy.

The A.B. degree must not suffer. It is a fixed standard that must be kept at a high level. But there are other ways for the college to adjust itself to increased enrollments. The short course in agriculture is a move in the direction of adapting the instruction of the university to meet the actual demands of life. Short courses and extension work in the common fields of human endeavor may be the beginning of the solution of the problem. Those who cannot stand the rigors of the classics, of higher mathematics, of science and of the humanities can certainly become better citizens and can assuredly make a greater contribution to our present civilization if the college will adapt its instructional program to meet their needs. It may be that there will be no A.B. degree at the end of the road but there can be another degree. There can be a certificate, a recognition given that will qualify the recipient to participate in some of the greater undertakings of life.

The College's Obligation to Society

The present insistence upon education as a qualification for membership in an enlightened civilization and in a live democracy places a solemn obligation upon every college. Although high school graduates are seeking admission to college as never before, unless they can go to college and feel confident that if they do their part there will be no return home at the end of the first semester with the alibi of bad eyes, or poor drinking water, then the college fails to meet the demands of our present civilization.

America is what it is to-day because it has broken traditions. It ill behooves the college to allow its function to crystallize. The college must not become a harbinger of another era that will be subsequently known as the Dark Ages. The social experiments of Russia, India and a few private schools are ever present reminders of the possibilities of an educational program that will be large enough and long enough to include everybody.

Guidance is the keynote to the modern educational program. The field of knowledge is becoming so large, specialists are becoming so essential to every line of activity, humanity is being freed so largely from the menial hand labor of yesterday, money is becoming so much more abundant, child labor is becoming so abhorrent to our modern thinking, that if a boy cannot go to college

we must ask ourselves, where can he go? With these facts staring us in the face and with the added knowledge that has come from research in the fields of science, economics, psychology, sociology and education, it is apparent that unless we develop a scientific and objective program of guidance progress must stop and we must enter the doldrums of educational inertia and inefficiency.

Dangers That Confront Freshmen

Educational guidance is not enough. The high school graduate has a right to expect social guidance. This does not mean the imposition of an outworn morality upon him. It means that he should have criteria for judging values. With the increased program of extra-curricular activities, the abused program of college athletics and the opportunities for participating in commercialized amusements the pitfalls of the freshman year are increased. This danger is directly proportional to the freshman's distance from home and correlates with the growing practice of locating colleges in larger cities. It is further augmented by the increased enrollments in colleges.

Social guidance does not mean a system of rules and regulations, the breaking of any one of which will mean expulsion. It does not mean compulsory chapel attendance. It does not mean a dean seated in some musty corner of the old hall who may be consulted at office hours or upon request. It does not mean a system of chaperonage at the fraternity or the junior "proms." Social guidance means a program that will make it impossible for the youth to free himself from lessons taught by earnest parents, to break away from the teaching of early adolescence or to lose himself in the distractions of the new world and the new career that await them.

Supplying Moral Guidance

The program of guidance further includes moral aspects. The qualities of leadership, service and character are indissolubly bound up with scholarship. Moral guidance is the keystone to the perpetuation of our civilization. Medicine with its code of ethics, law with its professional ideals, teaching with its adherence to what is right, in fact all professions that attempt to formulate a system of accepted behavior are evidence that there is need for moral guidance. College degrees are but symbols. They become empty and vain unless they carry testimonials to the character of their recipients. The educated person devoid of the guiding principles of worthy ethical character becomes a rudderless ship ready to destroy or to be driven to destruction.

Thus the high school graduate, his parents, society and posterity rise up in the power of their might and demand that the college exercise its supreme right of guidance.

The high school graduate has a right to expect from his college teachers a high degree of efficiency in methods of teaching. He has come up through schools where methods have been stressed. He has been trained in institutions that have been profoundly influenced by the results of scientific studies in the fields of methods and materials. He has the right to expect that as he advances higher refinements of these will be evidenced.

Teachers Must Know Principles of Teaching

It is well known that the modern movements in education have made much progress in the methods of teaching in the lower grades and in the secondary schools. The work of Judd, Gray, Buswell, O'Brien, Stone and others in the field of reading has made the teaching of this subject a science. The same may be said of handwriting, typewriting, arithmetic, spelling and several other studies. This has been recognized to the extent that our elementary schools now demand normal school training for their teachers. The accrediting agencies of the high schools and the state universities as well as the state laws of the certification of teachers demand that high school teachers have from twelve to fifteen or more hours of education. There is a general tendency for schools to demand that their superintendents and their principals have at least their Master's degree in education. The reasons for these requirements are obvious. The scientific study of education has made its contributions to the efficiency of the school and of education.

All high school principals have heard harrowing tales of immature and unscientific procedures used in freshman classes by young graduate students who are earning their scholarship fees by teaching these uninitiated beginners. Impractical methods, divergent objectives, differing emphasis, contradictory statements met with in the field of required freshman English are common knowledge. Rehashed lectures from poorly taken notes are given as the pabulum in history courses or as work in the introduction to literature. High rates of failure, conformity to a curve of distribution of grades and long lists of assigned readings are given for no other purpose than to receive the plaudits of the head of the department. And this is what the college freshman has to encounter after being under the tutelage of well prepared and scientifically trained technicians in the high school.

College teachers are beginning to recognize the

need for knowledge of the principles of teaching and of the laws of learning, for a definite statement of objectives and for a procedure that is valid. But the beginnings are slow and progress is sometimes imperceptible. It is unfortunate that the Mark Hopkinses of modern education are reserved for the graduate students and that the charming influences of the "grand old men" of the college can be felt only in the seminar rooms of the upper classes.

There is a science of method and a science of technique. Morrison has given evidence of better attacks upon the problems of learning than the cut and dried lectures conned by rote from musty scraps of paper. Education does not mean memorizing pages of a book or rewriting classroom lectures. Teaching does not mean fifteen hours that have to be spent in the drudgery of teaching—so much time that the university requires a professor to spend away from his research problem and his work in productive scholarship. Teaching calls for an art that is based upon laws, rules, principles and a technique. It is not reading a lecture or telling what the pupil can get out of the assigned readings. Teaching is an art. It demands leadership, an understanding of the problems of learning, a vision of the practicability of employing the materials of instruction in solving the problems of life and in quickening the dormant capacities into life and action. Few graduate students working out their fellowship allotment are ready to be teachers of freshmen. The beginner has a right to demand something better. He has been accustomed to something better for twelve years. There must be no let down now at this most critical period in his educational career.

What Is Expected of the College

These are the things that graduates are expecting and have a right to expect from the university. These youngsters have come back from college at midsemester vacation and at spring vacation and have unburdened themselves. They are frank. They know what they have wanted. They want the college to take them and train them to the full extent of their capacity. They want the college teachers to understand the background of their training and experience. They resent any aspersion that is cast on their previous schooling. It is an insult to the friends, guides and teachers of their most impressionable years. They yearn for sympathetic, human and understanding guidance. They want real teachers. The college must not fail them.¹

¹Read at the third annual Mid-West Education Conference, Washington University, St. Louis.

When the School Should Own and Operate Its Own Laundry

Suggestions offered here should appeal to the superintendent who wishes to ensure complete sanitation by laundering within the school swimming suits and towels and school linens and fabrics

SCHOOL administrators heretofore have had the impression that laundries are advantageous only to universities or to private schools that enroll large numbers of pupils. More recently, however, the prevalence of swimming pools and cafeterias in public school systems has caused a shift in viewpoint. To-day there is a growing realization that definite economies in the laundering of cafeteria linens, swimming suits, towels, curtains and similar articles used in schools may be effected through the maintenance and operation of a school laundry.

Large city school systems in particular will benefit from the establishment of laundries, although any system that has one or more schools with swimming pools and cafeterias should have its own laundry. Whether the plant should be centralized to handle all the work at one place or

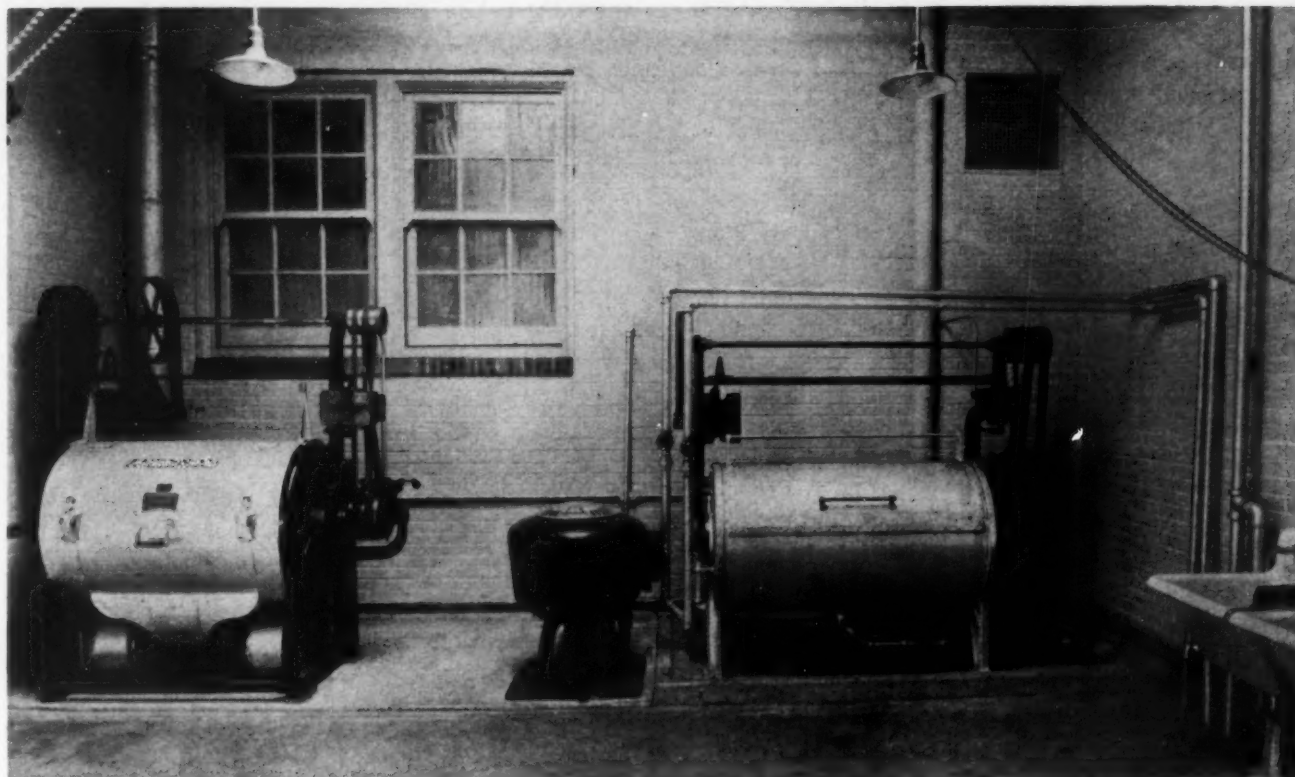
whether each school should have its own plant will depend on local conditions.

Any school that has resident pupils must provide some means of washing their wearing apparel as well as their bed linen, table linen, napkins and towels. This applies to private and military schools as well as to colleges and universities that operate their own dormitories. Many institutions handle the laundry work of the pupils in their laundry plants and in some cases the profits derived from this source cover the complete cost of operation.

Other financial advantages, even in a public school system, center chiefly about the smaller investment in linens and clothing that is possible when the school operates its own laundry. Smaller supplies of linen are kept in stock than would otherwise be necessary. In addition, gymnasium or tank suits, athletic uniforms and towels have



Up-to-date laundry machinery has been installed in Central Junior High School, Kansas City, Mo.



Laundry machinery in McClain High School, Greenfield, Ohio, is adequate for the needs of the smaller school.

a much longer life than they would if they were entrusted to those doing the work for profit. When the school's policy is to provide such equipment because of the ease with which rigid sanitation may be enforced, the possible saving effected if the school operates its own laundry is obvious.

Competing With Commercial Laundries

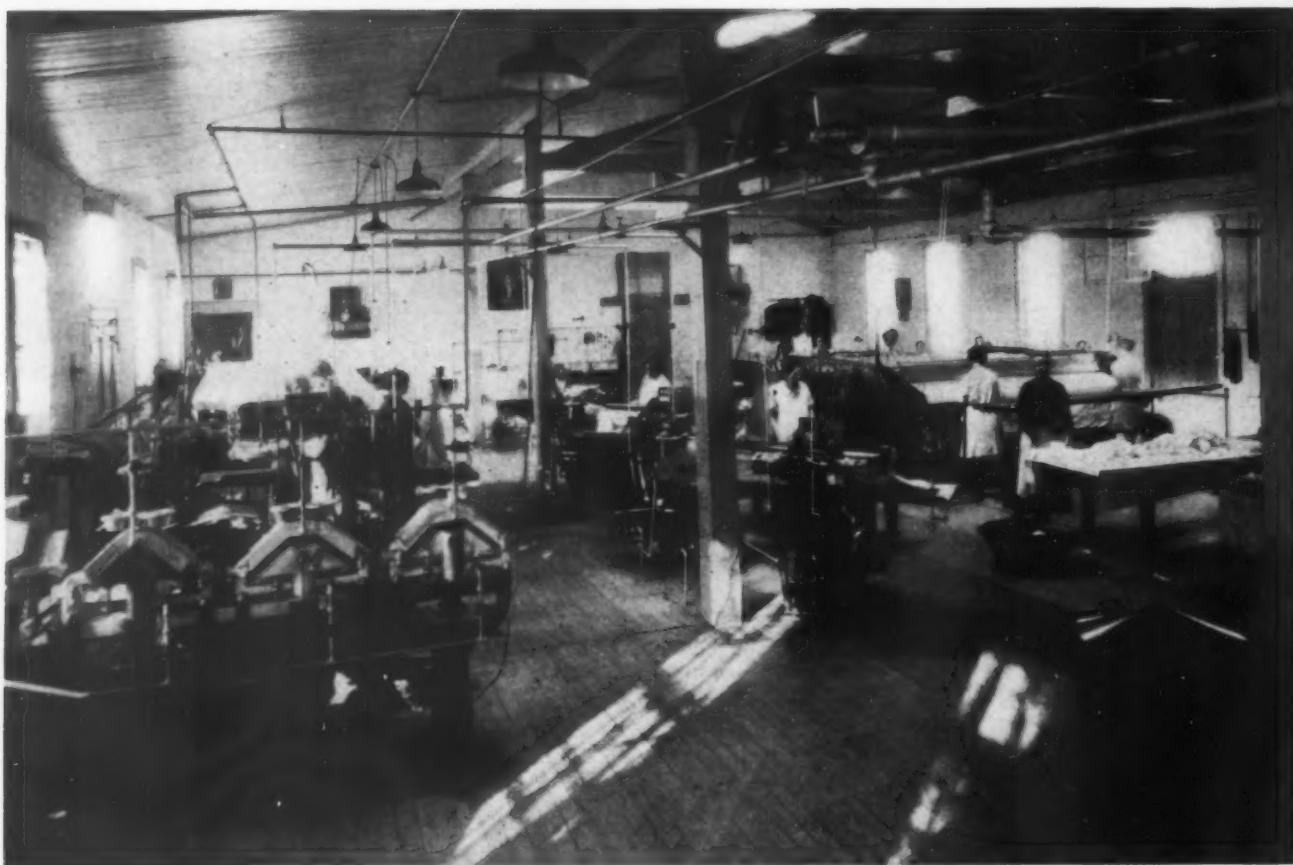
The question whether it is more advantageous to make a contract with a commercial laundry or to do the washing within the system is sometimes discussed by school superintendents. Commercial laundries usually give prompt service, but so do school laundries under proper supervision. Commercial laundries would be responsible for losses, but under proper supervision school laundries have few losses. Commercial laundries are prepared to offer attractive rates for the steady volume of work possible under school contracts, but with a competent laundry man in charge or a man with a working knowledge of laundries supervising, the cost of operating a school laundry is less than the best rate commercial laundries can quote.

Many schools have not installed laundry equipment because they figure that its cost would be excessive, but there is available small "group drive" equipment which comes easily within the reach of the smaller institution. In these groups, the machines necessary for washing, extracting and drying or ironing are assembled in a compact arrangement which reduces floor space to the mini-

mum consistent with economical and efficient operation. These groups are usually operated as a unit by one belted motor. The driving motor, together with the necessary pulleys, belting and shafting, is mounted above the machines on heavy castings firmly bolted to the frames of the washer and tumbler. With this arrangement, a minimum of floor space is occupied. If desired, groups can be provided with handy flat work ironers instead of drying tumblers. In institutions where a limited amount of laundry service is required and a minimum investment is desired, the group arrangement will be found highly profitable. Large universities or residential schools will of course require equipment comparable with that in some of the metropolitan commercial laundry plants.

Laundry equipment of a somewhat different type is installed in the housekeeping suites of many modern schools. This equipment parallels that used in modern homes. Usually there are a mangle, an interior gas heated dryer, an electric washing machine and wringer, and additional wringers are added as required. Clothes trees, ironing boards and electric irons are also provided in the quantities demanded by instructional needs.

Operation of a school laundry adds little or nothing to the administrative problems of a school superintendent or business manager. Large colleges, universities and private schools doubtless need an experienced, well qualified laundry manager to take complete charge of the plant and



Laundry at Notre Dame Academy, Notre Dame, Ind., is ironed in this sunny, cheerful room.

administration. His position, authority and remuneration should be comparable to those of a commercial laundry manager. Full-time employees are desirable in such plants, where the volume of work is usually sufficient to keep a regular force busy during an eight-hour day.

In public school systems, the laundries may safely be placed under the care of the regular school custodians. A little training may be necessary, but with strict supervision exercised by a full-time laundry superintendent who can check up on the custodians, management should present few problems. In each school one part-time woman assistant can provide all the help that is needed for normal requirements. Naturally the number of workers depends upon the size of the institution and the amount of laundry work to be performed. A practice often followed is the employment of women in a double capacity: as cafeteria workers one-half of the day and as laundry workers the other half. This makes it possible to employ more full-time workers and eliminates from the pay roll some of the part-time help. Women who formerly worked only one-half day in the cafeteria probably would be glad to work full-time.

School laundries have already proved their worth under trying tests. Obviously local conditions govern the policy in such a matter as the

establishment of school laundries, but the convenience and economy of operation as outlined here should appeal to school superintendents who wish to ensure complete sanitation in the use of swimming pools and in the laundering of school linens and fabrics.

English Is Compulsory Language Subject in Chile's Schools

English has replaced French as a compulsory foreign language subject in the secondary schools of Chile, according to W. S. Culbertson, United States Ambassador to Chile.

Not only is English one of the main subjects in the secondary school curriculum, but it is also required in the commercial schools. It is taught in the School of Arts and Crafts, in the normal schools and in the University of Chile.

"The teaching is both practical and theoretical. The work includes the reading of books dealing with the daily life of English speaking peoples and these books are criticized in class. Furthermore the work offered to the students includes courses in English and American literature, history, grammar, style and composition, and phonetics."

Determining the Status of the High School Assembly

Answers to a questionnaire sent schools of Idaho, Oregon, Montana and Washington show the position occupied by and the progress being made in assemblies in these states

By R. D. RUSSELL, Professor of Secondary Education, School of Education, University of Idaho

THE modern school assembly seems to be an outgrowth of the old college chapel and of modern educational theories. The older chapel exercise consisted essentially of reading passages from the Bible, commenting on them, praying, giving moral and religious advice, and making announcements. The principal or superintendent was the one who almost always did the reading, made the announcements and led in prayer. It was hoped that these readings, prayers and exhortations would eventuate in a higher type of religious and moral conduct.

Were it not for the widespread knowledge of modern educational theories that has developed in the last few years this practice would no doubt have continued to a much greater extent than it has. The emphasis given to such things as education for citizenship, learning to do by doing, learning in its natural setting and purposeful activity has done a great deal toward converting the old chapel into the modern assembly.

Questionnaire Method Was Used

The present investigation is an attempt to determine the status of high school assemblies in Idaho, Oregon, Montana and Washington. Six hundred questionnaires were mailed to schools of these four states, and 310 replies were received: Idaho, 61; Oregon, 73; Montana, 73; and Washington, 103. The following questions were asked:

1. What are the number of assemblies held per month? The time and the day held? Is your assembly period provided by schedule or called as the need arises?

2. Please check your method of arranging assembly programs: by the principal; by a committee composed of faculty members; by a committee composed of student body officers; by a committee composed of faculty members and student body officers.

3. Indicate the approximate percentages of time allotment for the various types of assemblies: programs by pupils; administrative detail; outside speaker; talks by faculty members; any other type.

4. Mention some programs given by the pupils that you have found good.

5. Who presides at your assemblies?

6. What is your practice in regard to devotional exercises?

7. What suggestions based on your experience do you make for the improvement of assemblies?

The answers to these questions will be discussed in the accompanying tables, the first of which has to do with the number of assemblies held per month.

Frequency of Assemblies

The range in frequency of assemblies held per month as indicated in Table I is striking. These schools vary in practice from 1 to 20. The weekly assembly leads in frequency with 37.4 per cent of the schools following this plan. This percentage is probably larger than can normally be expected. The next arrangement in order of frequency is that of one assembly every two weeks and the third is only one a month. Thus it can be seen that as far as practice in the Northwest is concerned, assemblies are not held too frequently to prohibit a sufficient amount of preparation for successful participation on the part of pupils. Moreover it may be observed from the table that the size of the high school is not a factor in the frequency of the assembly period.

Table II will give some idea of the most popular day for assembly exercises. This table indicates that assemblies vary greatly with respect to the day on which they are held. More schools have the arrangement of calling assemblies when the need arises than meeting according to a schedule. If a regular day is set aside for assemblies, however,

TABLE I—NUMBER OF ASSEMBLIES HELD PER MONTH

No. of Schools	Enrollment	Assemblies Per Month											
		1	2	3	4	5	6	8	10	12	16	20	Irregular
3	2,150-2,488		1		1	1							
9	1,000-1,679		2		4		2						1
20	527-950	2			7		2					1	8
130	100-450	2	26	3	50	1	8	8		1	1	4	26
148	10-98	18	32	5	54	4	2	12	2	1		13	5
310	Total	22	61	8	116	6	14	20	2	2	1	18	40
	Percent	7.09	19.7	2.58	37.4	1.93	4.5	6.45	0.64	0.64	0.32	5.8	12.9

it is most likely to be Friday. Next to Friday would probably come Wednesday.

Table III has to do with the time of day of meeting. From this table it may be observed that the first period in the morning is the most popular, and next to this is the fifth period, with the seventh period coming very close to the fifth. Irregularity, however, is the rule with respect to the time of day of assemblies, as well as the day on which assemblies are held.

The length of assembly periods may be observed from Table IV. The most popular length is between forty and fifty minutes. A number of small schools, however, report assemblies lasting from 100 to 120 minutes. These are, no doubt, assemblies that meet infrequently.

Table V indicates that almost half the assemblies do not have a regular day and hour for meeting but are called as the need arises. Practically the same number are scheduled. The remaining schools did

not give a conclusive answer to this question.

Question 2 has to do with the method of arranging assembly programs. Principals were asked to check whether the programs were arranged "by the principal," "by a committee composed of faculty members," "by a committee composed of student body officers," or "by a committee composed of faculty members and student body officers combined."

Table VI is a summary of the answers to this question. It is evident from this table that the principal and faculty members are the ones who bear the chief responsibility for making the assembly programs. Student body officers are independent in making such programs in 54 cases, but usually when they participate they are directed or are accompanied by faculty members.

It seems that with the proper organization for assemblies, more responsibility could be placed on the pupils than is indicated in this table. Probably as much development is secured by arranging programs as by participation in them. If this is true, it is evident from the table that faculty members are the chief educational beneficiaries in this respect, with the principal the most fortunate of them all. How can the pupils secure training in self-reliance, initiative and originality without the opportunity for practicing these traits?

Question 3 has to do with the time allotments to "pupil programs," "administrative detail," "outside speakers," "talks by faculty members" and "any other type." Only 274 of the 310 schools answered this question. The answers are summarized as follows: pupil programs, 43 per cent of the time; administrative detail, 15 per cent of time; outside speakers, 22 per cent of time; talks by faculty members, 9 per cent of time; other types, 11 per cent of time.

This summary indicates that pupil programs consume less than half the time of assemblies. Table VI indicates that in planning for assemblies, principals and faculty members received the major share of development. This summary indicates further that from the standpoint of actual participa-

TABLE II—DAY OF HOLDING ASSEMBLY

No. of Schools	Day Held	Per Cent
9	Monday	2.90
7	Tuesday	2.25
30	Wednesday	9.67
8	Thursday	2.58
75	Friday	24.19
2	Monday and Wednesday	0.64
1	Monday and Tuesday	0.32
1	Monday and Thursday	0.32
1	Monday, Wednesday, Friday	0.32
18	Mon., Tues., Wed., Thurs., Fri. . .	5.80
5	Monday and Friday	1.62
2	Tuesday and Friday	0.64
7	Tuesday and Thursday	2.25
1	Wednesday and Friday	0.32
40	Irregular	12.90
101	Not reporting definitely	32.58
2	None	0.64
310		

TABLE III—TIME OF ASSEMBLY

No. of Schools	Enrollment	Period of Day Held							
		1	2	3	4	5	6	7	Irregular
3	2,150-2,448		1		1				1
9	1,000-1,679	3						1	5
20	527-950	8		1	1	3			7
130	100-450	30	5	2	13	28	4	14	34
148	10-98	37	1	6	7	12	5	19	61
310	Total	78	7	9	22	43	9	34	108
	Per Cent	25.16	2.2	2.9	7.1	12.4	2.9	10.09	34.9

tion, the pupils are not receiving opportunities to which they are entitled. Outside speakers consume almost a fourth of the time allotted to assemblies. This amount of time given to outside speakers is questionable.

The following facts taken from the data are interesting. Four schools gave all the time to pupil programs; 10 schools gave no time to pupil programs; 33 schools gave no time to items of administrative detail; 30 schools gave no time to outside speakers; 100 schools gave no time to talks by faculty members; 104 schools gave no time to other types; 132 schools gave less than 50 per cent of the total assembly time to pupil programs, and the same number of schools gave more than 50 per cent. Eleven per cent of the assembly time was given to administrative detail in schools with enrollments of 527 to 2,448; 16 per cent in schools with enrollments of 100 to 450, and 19 per cent in schools with enrollments of 10 to 98.

It will be noticed that the relative amount of time given to administrative detail varies inversely with the enrollment of the school.

Question 4 includes a request for some pupil programs that administrators had found good. Ninety-five out of the 310 who returned the questionnaire did not answer this question. Following is a list of the different programs reported.

Music—Band music; Christmas music assembly; music by the department of music; orchestra, band

and glee club concerts; band concerts; assembly singing; glee clubs; music programs; music; our main standby is group singing.

Current Interests—Superintendent gave a current events talk; general welfare; health day programs; fire prevention; Campfire Girls' programs.

School Interests—Advertising school activities; annual home-coming programs; programs by honor society classes; programs to advertise entertainments or athletic contests; talks on school interests by pupils; award assemblies; honor societies; pep rallies and dramatics; pep assemblies; reports of visits to other schools; reports of delegates; pupil business; athletic pep talks by members of team; pupil report of college conferences; speeches by seniors; student body programs; club programs where there is rivalry to put on a good program.

Curriculum Centered Assemblies—Demonstrations of the activities of the various departments of the school; entertainment by oral expression classes; one-act plays; short original plays; Smith-Hughes programs; typewriting contests; birth anniversaries of authors; class programs; dramatics; debates; little plays advertising various activities of the school; literary club programs; oratorical contests; programs of type of writings of various poets and authors; public speaking programs; readings; stunts and plays; Spanish and Latin short plays; pupils take part in and manage Smith-

TABLE IV—LENGTH OF ASSEMBLIES

No. of Schools	Enrollment	Number of Minutes					Not Being Reported
		10	15-20	30	40-50	10-120	
3	2,150-2,448			2	1		
9	1,000-1,679				9		
20	526-950		1	5	12	2	
130	100-450		15	25	54	30	6
148	10-98	5	16	36	51	23	17
310	Total	5	32	68	127	55	23
	Per Cent	1.6	10.32	21.96	41.0	17.8	7.46

Hughes programs; typewriting contests; book reports; literary programs; programs giving interesting features of class work; original pantomime.

Special Days—Holiday programs; Washington and Lincoln programs, or Memorial Day exercises; Pioneer Day celebrations; patriotic and holiday programs; Lincoln, armistice and Christmas programs; national holiday programs from history department.

Miscellaneous—Extemporaneous speaking; girls' league explains dress regulations; programs prepared by classes under faculty and class officer supervision; thrift programs; talks by ministers; vocational guidance talks; competitive class vaudeville; extemporaneous talks; Frances Willard programs; good will programs presented by neighboring schools; lyceum lectures; vocational guidance talks by prominent men of the community; contests between the girls and boys with outside judges; extemporaneous speaking; movies; mock trials; parliamentary drill; surprise assemblies conducted by clubs; sophomore English staged a clever take-off on faculty members; talks by local speakers, Rotarian or minister.

The variety is interesting. However, the lack of programs dealing with things of community interest is the most striking feature of the list. Moreover things of current interest were limited in number.

English Clubs Predominate

If a glance is given to the clubs listed as curriculum centered, it will be observed that the English department monopolizes the greatest proportion of time. This practice is questionable in view of the wide range of interests represented by the high school curriculum. Civic and social problems do

95 times; principal or student body president, 89 times; the student body president, 78 times; the superintendent, 11 times; a faculty member, 5 times; a pupil, 6 times; chairman of the program committee, 2 times; principal, president of the student body or yell leader, 2 times; number of schools not reporting, 22.

The summary probably indicates that the superintendent, principal or some faculty member usually presides at assemblies. The chances are that when the report included, "principal or student body president," the student body president presided only at student body meetings. If this is true, pupils do not have the opportunity of presiding in assemblies nearly as often as do faculty members. The benefit, therefore, resulting from this type of activity goes largely to the faculty rather than to the pupils.

Question 6 asked for practice in regard to devotional exercises. This question was answered by 103 schools in Washington, 73 in Montana, 73 in Oregon and 61 in Idaho. The summary of reports is as follows: Bible reading reported, 42 times; religious services reported, 10 times; no devotional exercises reported, 244 times; not answering, 14 times.

It is clear from this summary that Bible reading is not practiced to any great extent in the Northwest. Only 42 out of the 61 Idaho schools reported devotional exercises, and in almost every case these exercises consisted merely in reading the Bible as required by law. The other three states included only 10 cases in which the Bible was read. The following statements are fairly typical, and give some idea of the attitude toward Bible reading in public schools.

Idaho—The reading of the Bible as outlined is a

TABLE V—SCHEDULE OF ASSEMBLIES

<i>No. of Schools Reporting</i>	<i>Enrollment</i>	<i>Scheduled</i>	<i>Called as Need Arises</i>	<i>Called or Scheduled</i>	<i>Not Answered</i>
3	2,150-2,448		3		
9	1,000-1,679	2	6	1	
20	527-950	8	9	3	
130	100-450	66	57	5	2
148	10-98	72	74		2
310	Total	148	149	9	4
	Per Cent	47.8	48.0	2.9	1.29

not seem to be represented as strongly as they should be.

Question 5 is concerned with who presides at assemblies. The answers to this question will give some idea relative to the amount of participation on the part of pupils. The summaries of the answers are as follows: The principal was reported

great joke; only Bible reading; such exercises are held occasionally; we aim to have a local pastor take one assembly a month; Bible reading without comment; Bible reading in each room each morning; one chapel service each semester; Bible reading in each room from 8:55 to 9:00; Bible reading according to law; held jointly with assembly; Bible

reading every morning for a period of ten minutes.

Oregon—Leave that for the churches where it belongs; very little—this is left to the church of the community; up until this year, daily; only on Memorial Day; prohibited by law; songs and Scripture reading—no special programs or prayer; we

The summary of suggestions for the improvement of assemblies is hopeful, 57 reporting that more pupil participation was needed, and only 16 reporting that more faculty activity was desirable. These facts show a tendency in the right direction. Moreover, well planned programs were

TABLE VI—ARRANGEMENT OF ASSEMBLIES

<i>Enrollment</i>	<i>By the Principal</i>	<i>By Faculty Members</i>	<i>By Student Body Officers</i>	<i>Student Body Officers and Faculty</i>	<i>Not Answered</i>	<i>Total Times Checked</i>
2,150-2,448	2	1	0	0	0	3
1,000-1,679	5	0	1	6	0	12
527-950	7	1	1	8	0	17
100-450	74	18	29	64	1	186
10-98	83	23	23	62	4	195
	171	43	54	140	5	413

have none unless some outside speaker wishes to conduct them; have none but encourage the study of the Bible; give periodic examinations in the Old and New Testaments; we have none; would like to have them as far as the principal is concerned; music only.

Montana—The pupils would not stand for such exercises. They are certainly needed. I wonder how many schools have them? Scripture reading and prayer by minister; very little used; none in Montana; in North Dakota and Kansas a short Scripture reading and the Lord's prayer are effective; in my opinion, they have no place in the school program; we have none—school is not for the purpose of relieving the home and the church of their responsibility; have none except occasional hymns; none, patriotic exercises instead.

Washington—Seldom have them; no religious ones; prohibited by law; don't have them in this state and wouldn't if we could; don't have them: they have no place in a public school; we don't believe in them and have Hi-Y programs instead; we have none if I know what you mean; hymns at appropriate times; we have none.

The seventh and last question called for suggestions for the improvement of assemblies. The suggestions reported were summarized according to the needs as follows: More pupil participation, 57 times; a speaker who has something to say, 35 times; a regular period with faculty members responsible for the program, 16 times; well planned programs, 25 times; miscellaneous and trivial answers, as: "I wish I knew," "Pupil interest," "Parliamentary drill," "Eliminate all trivial matters," "More meat," "Make them short and snappy," 85 times. Ninety-seven schools failed to answer.

mentioned 25 times, a thing that is also very necessary for successful assemblies. High school principals are evidently working in the right direction.

Summary

Assemblies meet four times a month in 37.4 per cent of the cases; twice a month in 19.7 per cent of the cases, and irregularly in 12.9 per cent.

Friday is the most popular day for assemblies. Next to Friday would probably come Wednesday.

Irregularity is the rule with respect to the time of day assemblies are held. If a period is set aside, however, it is most likely to be the first period. The fifth and seventh periods are also fairly popular.

The most popular length of the assembly period is between 40 and 50 minutes.

Approximately half of the assemblies do not have a regular day or hour for meeting but are called as the need arises.

The principal and faculty members bear the chief responsibility for planning assemblies. In this case, more responsibility could be placed upon the pupils.

Pupil programs consume less than half the number of assembly periods.

The programs that were reported as being especially good seemed to emphasize curricular interests first, with pupil interests second. Present day social problems did not seem to be emphasized.

The superintendent, principal or a faculty member usually presides at the assemblies.

The Bible is read in a limited number of schools. The impression seems to prevail that Bible reading is out of place in a public school.

More pupil participation and well planned programs are frequent suggestions for the improvement of assemblies.

Editorials

A Departmentalized Consultant Editorial Board

THE membership of a departmentalized consultant editorial board for The NATION'S SCHOOLS is announced for the first time in this issue. Outstanding leaders in every department of educational administration will give the editors of the magazine the benefit of their advice in helping them to preserve a proper balance in the contents of the magazine, to the end that the problems in one department of administration may not be emphasized to the neglect or disadvantage of other departments.

The NATION'S SCHOOLS plans to present the results of research into the problems of (1) secondary education, (2) higher education, (3) rural education, (4) personnel administration, (5) the selection and training of teaching staffs, (6) educational finance and business management, (7) curriculum reconstruction, (8) educational tests and measurements, (9) vocational guidance, (10) educational supervision and (11) educational publicity and public affairs. No educational administrator could direct a school system efficiently without giving attention to these several specialized fields in educational administration.

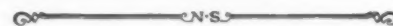
Since the early issues of the magazine, there has been continually increasing pressure put upon its pages to accommodate the articles that have been submitted by contributors who have been particularly interested in one or another phase of the general problem of efficient educational administration. It has become clear to the editors of the magazine that more valuable material is being produced than can be published in magazine form.

The questions then arise—What is of greatest importance in the field of educational administration? What are the current pressures that should receive special consideration in determining the contents of the magazine from month to month? Offhand, one might think that editors would need to take account only of needs and developments in general organization and administration; but those who are engaged in administration must deal with special problems that might not be adequately cared for if The NATION'S SCHOOLS should publish only articles on general organization and administration.

It is hardly necessary to say that it is not a simple

task to maintain a proper balance in the contents of the magazine, laying chief stress upon matters that are of chief importance and subordinating subjects that at the moment are of comparatively slight importance. In accomplishing this task efficiently, editors need the advice and counsel of groups of persons who are particularly interested in and are making a contribution toward the promotion of the work in the various educational activities in which The NATION'S SCHOOLS is interested and which it seeks to promote. The departmentalized consultant editorial board has been organized, therefore, with a view to securing the assistance of educational leaders in determining the policies of the magazine.

This board, which has representatives in every section of the country and in every type of educational institution, will cooperate with the editors in seeking out men and women who are capable of making a distinct contribution to the solution of perplexing problems in educational administration, and urging them to make The NATION'S SCHOOLS a medium for the publication of their contributions.



Reminiscences of an Educational Pioneer

ORDINARILY there is not enough of the dramatic element in a teacher's life to make the story of his experiences of interest to the man on the street or to the woman in the reception hall. Most of us are not deeply interested in or stirred by the unspectacular events in anyone's career. Consequently, the teacher goes on his way and passes to his reward unheralded and unsung, except in very rare instances.

The military genius, the political leader, the man who converts raw material into objects that minister to the needs or the vanity of mankind, the surgeon who repairs damaged human organisms, all these can be appreciated because their deeds are concrete, colorful and easily comprehended. So we are all eager to listen to tales of their experiences and achievements. But the changes the teacher works in the minds and hearts of his children are so elusive, so intangible, so unobtrusive, that men are not affected by them, with the result that he who teaches the young idea how to shoot must forever occupy an inconspicuous place in the picture.

There are, however, occasional exceptions. Elizabeth Harrison furnishes one instance of an educational leader who played a dramatic part in her day in leading parents to appreciate the need of training young children before they began their

formal education in the primary school. Miss Harrison's "Sketches Along Life's Road," recently come from the Stratford Press, is a colorful and impressive account of the development of the kindergarten as an essential part of our educational system. There is no longer any doubt in the minds of educational leaders concerning the benefits derived by a young child from a year or two in a modern kindergarten, but Elizabeth Harrison lived through a long period during which there was unceasing struggle to preserve the kindergarten. Her autobiography is a sort of history of educational thought in our country for almost half a century.

The kindergarten to-day is not much like the kindergarten when Elizabeth Harrison began her work in Chicago. The Froebelian philosophy which the kindergarten leaders wanted to have American educators accept without modification has at last been so fundamentally reconstructed that students who are being trained in the National Kindergarten Training College founded by Miss Harrison or in any other training college, are given a quite different conception of the nature and needs of very young children from what they were given during the initial period of the establishment of the kindergarten in America. The story of what has happened to the kindergarten could be made to apply with hardly any modification in principle to the changes that have occurred in every phase of public education during the past four decades.

Largely in consequence of Miss Harrison's insight and labors, the training of very young children in America is not left entirely to the home. It is not any longer based upon logical conceptions of what a child ought to learn; it is an outgrowth of the study of child nature and the adaptation of training methods to the physical, intellectual and emotional needs of the very young.

Your School—Its Construction and Equipment

THE school superintendent must of necessity be the master of a multitude of tasks either directly or as the director of others. In these days of closely watched finances he must apply himself with more than ordinary diligence to the subject of proper and economic purchasing. In most cases the astute superintendent will do this work himself because he will be held strictly accountable for every penny expended, but where school systems are large he must delegate the purchasing to the assistant who is best qualified for the work.

It is sometimes a difficult problem to pass judg-

ment on articles of equipment, maintenance and construction and more difficult still to obtain unbiased opinions on materials that are available. For this reason there appears in this issue of *THE NATION'S SCHOOLS* a new department entitled "Your School—Its Construction and Equipment." It will be conducted by an architect, Chester Hart, and his duties are clearly defined. He will publish facts founded upon actual investigation, will compare the merits of one article with a similar one, and will generally furnish intelligent data about products that the superintendent must know if he is to choose the best for his school system.

Are We Overemphasizing "Cultural" Education?

A PROMINENT superintendent is adopting as his slogan, "A Higher Education for Everyone." He is demanding that the colleges open their doors to all comers. He is denouncing college presidents because "they are attempting to develop a great intellectual aristocracy by closing their doors to all except the intellectually elite." Of course the man on the street will applaud these sentiments. It goes without saying that we Americans want everybody to have a good education. We are opposed to an aristocracy of any kind.

Thus far we have been taking a sentimental view of the matter. We have all been endorsing and promulgating the sentiment, "the more education the better." We are just beginning, though, to ask, "Can the nation assimilate those who have completed cultural college courses?" Some careful students of the situation are saying that the market is surfeited with college men and women traditionally trained. About all that a large proportion of the college output can do is to teach school or to sell bonds. The country is not able, apparently, to provide jobs enough for either bond sellers or teachers.

The situation that is developing in some of the countries in the Old World should be of interest and should perhaps be a warning to our country. There is growing anxiety in European countries and even in Japan regarding the problem of assimilating the intelligentsia. There are many more individuals who have received theoretical or verbal education in a number of these countries than can be utilized. They constitute the discontented and menacing groups. Their education has, in a way, unfitted them for most of the work that needs to be done, and they advocate an overturning of the existing institutions in the hope that in the break-up they may find a way to make their living without having to use their hands, or even their heads, in

the solution of actual problems relating to the physical, hygienic, economic or social problems that confront the people.

In a recent address, Prof. Paul Monroe, director of the international institute, Columbia University, who for years has been making a critical study of education in Europe and the Orient, stated that in his opinion a prominent cause of the World War was the large number of culturally trained persons who were exploiting the mass of the people and who were an economic drain upon the countries because their education had not prepared them to deal with the material problems that had to be solved in order to promote the well-being of the people.

The phrase, "A Higher Education for Everyone," must be interpreted differently in the future. A higher education must cover more than the so-called cultural studies. It must deal with everyday needs and activities. It must equip the dietitian, the machinist, the engineer, the farmer, the manufacturer, the merchant, the teacher and the householder each for his special task as well as for his general needs. All these persons are or should be citizens, and they have general intellectual, social and esthetic as well as specific needs. Higher education must hereafter, more generally than it has done so far, take account of all the needs of persons in daily life and not simply cultural needs that have been set far off from their everyday experiences.

Higher education has been taken too seriously and has been guided too largely by the views of one of our early poets who said that college should not teach a man anything that had any bearing whatever upon his daily life. We could easily have too much, and maybe we already have too much of this type of higher education.



Politics in the Schools

THE financial depression throughout the world is affecting American education in more ways than one. During the past few months reports have been coming to us from all sections of our country to the effect that inexperienced and comparatively incapable teachers are, by underbidding, dislodging teachers who ought to be in permanent positions. The last mail brought to the editor's desk a statement from a superintendent of schools in a moderate sized city in which he says that he has been fighting a losing battle against candidates for positions in his schools who offer their services for considerably less than teachers now on his staff are receiving. He is apprehensive that before the financial depression is over the

standard of teachers' salaries will be markedly lower than it is at the present moment.

A number of persons who are responsible for placing teachers have reported that it is becoming increasingly difficult to find places for new teachers who are adequately prepared, both scholastically and professionally, and who urgently need employment. Teachers are not leaving the profession this year in as large numbers as has been true heretofore. On the contrary, teachers who had abandoned teaching for more lucrative work are striving now to return to the classroom. Teaching is, in this crisis, the most secure and in many communities apparently the best rewarded profession. Add to this situation the fact that all the training schools, including colleges and universities this year, are turning into the teaching profession a great body of recruits and it can be understood that there is now a good deal of active, and perhaps unethical competition for places in the schools.

The competition is just as keen for the higher as for the lower positions. Reports from three cities tell that superintendents of long tenure have been replaced by comparatively untried men, at least in the superintendency position. In most instances the new incumbent had been put into his position by friends who wished to give him financial help. The charges made against the dislodged superintendents were superficial and, in at least one instance, wholly without foundation. The competitors seemingly had to have positions and their sponsors had sufficient political influence to unseat the reigning superintendent and put the contender in his position.

Before the present economic calamity fell upon the world, we were making gratifying headway in establishing permanent tenure throughout the country for both teachers and administrative officers. The reports from the field at this moment are disquieting but we cannot believe that we shall lose the ground we have gained through decades of struggle. Economic prophets do not agree respecting the duration of the financial depression, but we predict that the disturbance taking place now in the breakdown of tenure regulations, whether established by law or by custom, will not set us back permanently in regard to tenure.

Not so long ago it was entirely ethical and a general practice for a teacher or principal or superintendent to compete actively and even underhandedly for the dislodgement of a person whose position he desired. We cannot think that, no matter how long the economic depression may continue, we shall revert to the unethical competition among educational workers that was general a quarter of a century ago.

Happy to Say—By WILLIAM McANDREW

UNDERWORK is one of the schoolman's most curable diseases.

HARRY OVERSTREET never knew an educator to die of its opposite.

IN MY sixty years' contact with teachers, principals and superintendents, I never knew any who suffered from overwork. I have known some who thought they did. If you listed what they were doing you found 50 per cent of it better left undone. They should have taken on real work so as to crowd out the useless.

FROM Pythagoras to Herbert Hoover, the masters of minutes have, when rushed, listed their obligations and sorted them as to urgency.

TO THE putterer, work cometh as it listeth. The doer listeth it as to its place.

AN EXECUTIVE'S escape from the feeling that he is driven is curable by the prescription: organize, deputize, supervise.

PRINCIPAL POTTER had a small school. He did everything so well he was put over a big one, forty teachers, a head of department, a clerk. Potter kept on doing everything. He was in the office all day Saturdays and Sundays.

THE president of his board asked me to recommend a principal in Potter's place.

"What's the matter with Potter?"

"He works all night. We want a human being."

I went to see Harry. His desk, like his mind, was a mess. We separated piles into "to-day," "to-morrow," "any time." We turned half of it over to the clerk. We started an agenda sheet and distributed the urgent stuff through the next seven days. The thing that knocked Harry into shape was telling him that no railroad manager would want to blow whistles and turn switches.

AFIVE-THOUSAND dollar school man who wastes himself on thousand-dollar work is a grafter.

LIVES of small men oft remind us
We can make our lives so thin
That the folks we leave behind us
Will not know we've ever been.

I SEE that Dr. Walter Wexler is out with a hygiene for worried workers. List your irritants, says Doctor Wexler, and give them ratings in proportion to their annoyance.

HERE'S mine:

10—Books dropping on the floor.

20—Newspaper bunk against the Eighteenth Amendment.

30—Current advertisements of "daring" books.

40—The children eating bananas all over the place.

50—Mr. Noys at our boarding house smacking his food.

60—Mr. Steffens at directors' meeting drumming his fingers.

70—Typical high school commencements.

90—Any board of education meeting.

But for these things my life for the past eighteen years has been a symphony.

WEXLER says: "When you get all depressors, annoyers, irritants, troublers, provokers and rilers listed and scored, practice standing the worst five. Hunt 'em up, invite 'em, practice on 'em."

EVERY master artist practices his profession regularly. So does a man become master of circumstances.

MY PHYSICS teacher taught me no energy is ever lost. Heat makes motion. Motion makes heat. Why isn't that true of human effort? If I warm up to an act of service and fail to see that it does any good, what's to hinder me believing it is somehow conserved and working unseen?

MR. WHEELER of the Enoch-Pratt Free Library, Baltimore, says over five hundred professional books a year are printed not including articles in periodicals. But I am worth only so much as I put of the best I know into my teaching. It isn't how much I read but how much I assimilate and translate into my daily life that counts.

THE Montclair, N. J., Board of Education has given Supt. Frank Pickell a contract for life. Chicagoans spoil the superintendency so often it should be pickelled.

*Your Everyday Problems:**

Should Colleges Require Junior High Grades for Entrance?

By JOHN GUY FOWLKES, Professor of Education, University of Wisconsin

MANY administrators have contended for some time that colleges should limit entrance requirements to the credits furnished by the senior high school alone. This view has been held ever since the reorganization of the elementary and secondary school curricula upon the basis of the six-three-three plan.

Numerous state departments of public instruction, as well as the National Education Association, have made recommendations that the senior high school be the sole agency responsible for accrediting pupils to higher institutions of learning. A few colleges and universities have complied with this recommendation. The majority of such institutions, however, have clung to the traditional methods of requiring the ninth year credits in addition to those of the senior high school. As Glass points out, under these circumstances, the contention arises as to why the colleges and universities should by this entrance requirement dominate the junior high school curriculum. Such domination has been partly responsible for retarding the full realization of the principle of continuity in the reorganization of the junior high school core curriculum.¹

A Field for Exploration

The origin of the junior high school lies in the fact that there was a definite need for a new curriculum whereby the pupils of the elementary school might be given a variety of experiences and a continuity of training. For some time, there had been current an opinion that pupils should no longer be helped, prodded and threatened into the memorization of certain bits of knowledge which were thought to be of disciplinary value. Educators recognized the fact that the subjects of the lower grades were being taught as subjects in themselves with little relation to anything else. This procedure left the pupils more or less unpre-

pared for high school. Consequently, the junior high school curriculum was built that the pupil might become better adjusted to the real purpose of secondary education.

Many administrators contend that the mission of the junior high school is so far removed from the work of taking the pupils through courses intended primarily to satisfy college entrance requirements that it should be entirely free from a specific regulation for college entrance. The junior high school as a whole is not a field for specialization but for exploration. What little specialization there might be in it should come in the ninth year.

A Responsibility of Accrediting Agencies

Figures compiled by the United States Bureau of Education¹ show that out of every 1,000 pupils entering the first grade in the public schools, 710 enter the seventh grade, 642 enter the eighth, 342 the ninth, 246 the tenth, 181 the eleventh, and 150 the twelfth, and 139 graduate. From this group of 139 graduates, only 72 enter college, of which 49 fail to graduate. This means that only 24.6 per cent of the original group, or 29.5 per cent of those entering the junior high school enter senior high school. This likewise means that 8.6 per cent of those entering junior high school and 29.2 per cent of those completing the course enter college. Why then should pressure be brought to bear by the colleges upon the junior high school with regard to its curriculum when the college comes in contact with so few of its pupils?

This insistence upon credits from the junior high school on the part of the colleges seems to be founded upon tradition rather than upon a scientific basis. Replies from 626 colleges to a questionnaire² sent by the National Education Association show that few colleges and universities are at present accepting students upon the basis of the senior high school work alone, but 75 per cent of

*Discussions in this department deal with problems that frequently confront principals and superintendents. Inquiries on problems of this nature should be addressed to Doctor Fowlkes.

¹Glass, J. M., *Curriculum Practices in the Junior High School and Grades Five and Six*, University of Chicago Press, 1926, p. 15.

²Accredited Secondary Schools in the United States, U. S. Office of Education, Bulletin No. 11, 1925, p. 1.

³The Junior High School Curriculum, Department of Superintendence, Fifth Yearbook, 1927, p. 33.



Small, compact, the new 16 mm. equipment can go right on your desk

Electrical Research Products announces a **16 mm.** **Western Electric Sound System**

TALKING PICTURES FOR THE CLASSROOM: Now, with the new 16 mm. equipment, educational talking pictures—which facilitate and enrich learning—may be shown in any classroom. Set-up in a few minutes, easily operated by the teacher, the 16 mm. is always ready for action.

FOR THE SMALL BUDGET: The low cost of this apparatus fits the budget of even the smallest school—and enables larger schools to use not just one but a number of equipments. Lower cost of educational talking pictures on 16 mm. film still further reduces expenditures.

WESTERN ELECTRIC QUALITY: The 16 mm. equipment



Easily carried from room to room

brings quality reproduction of talking pictures to the individual classroom. It achieves the same lifelike reproduction of sound and scene as the Western Electric equipment in 8,000 theatres throughout the world. Into the 16 mm. equipment has gone the same quality of design, material and workmanship that has made Western Electric the standard.

THE PERFECT COMBINATION: The educational talking pictures offered by Electrical Research Products and the new 16 mm. Western Electric Sound System are a perfect combination. Used to supplement regular teaching methods, they intensify and vitalize instruction, bringing a new teaching tool to the field of education.

Department of Educational Talking Pictures,
Electrical Research Products Inc.

Distributors of

Western Electric

EDUCATIONAL TALKING PICTURE EQUIPMENT

ELECTRICAL RESEARCH PRODUCTS, INC.
250 West 57th Street, New York, N. Y. NS 8-31

Gentlemen—Please send me further information on the new 16 mm. equipment. Also on educational talking pictures, and how I can use them.

NAME

ADDRESS

CITY

STATE

them apparently would do so if the different accrediting associations would sanction such a practice. More specifically, out of a group of 491 four-year colleges, thirty-nine, or 7.8 per cent, at present admit students on the basis of three years' high school work without any reference to the junior high school credits. Of this same group, 73.2 per cent would be inclined to accept credits from the senior high school only if other institutions and accrediting agencies would do likewise.

The colleges of the North Central Association seem to be the most liberal in admitting students without reference to junior high school credits. Twelve and one-tenth per cent of the colleges in this association admit students to college on senior high school credits only. The Southern Association of Colleges reports that 7.8 per cent of its members accept credits from the senior high school alone, while the Northwestern Association reports 3.2 per cent of its members accept students on this basis. The Association of Colleges and Secondary Schools of the Middle States and Maryland reports that 4.1 per cent of its members are in favor of admitting students on the basis of senior high school credits alone, and the New England Association of Colleges and Secondary Schools reports that 2.9 per cent of its members favor admittance on that basis.

In 1925, the state department of public instruction of Pennsylvania recommended to the colleges and universities of that state that students be admitted solely on the basis of their senior high school credits. Nine of the institutions in the state, including the University of Pennsylvania, the University of Pittsburgh, and Pennsylvania State College, have complied with the recommendation of the state department and are presumably admitting students from the six-three-three organization upon this basis. Eighty-four and six-tenths per cent of a total of 1,419 school superintendents, upon being asked their opinion concerning this question by the N. E. A., replied in favor of the senior high schools.

Many Favor a Revision

The accrediting agencies are giving attention to the problem of the relation of the junior high school to college entrance requirements. As early as 1925, the Association of Colleges and Secondary Schools of the Middle States and Maryland recommended that colleges be encouraged to try out the plan of accepting graduates of the junior high schools on the basis of twelve units of entrance credit taken entirely in the senior high school. The New England Association of Colleges and Secondary Schools adopted a report stating that the chief burden of preparation for college must rest

on the senior high school and that it should be possible for the pupil who has followed a non-college preparatory curriculum in the junior high school to meet the college entrance requirements in the senior high school. Likewise, the North Central Association of Secondary Schools and Colleges has indicated that it favors the revision of the terms of admission to colleges in the north central territory so that students may qualify for entrance on the basis of work completed in the last three grades of the secondary schools.

"Only One College Preparatory Unit"

James M. Glass, an authority on the junior high school curriculum, has stated the situation clearly as follows:

"There can be only one college preparatory unit in the public school system. This has been the senior high school and this school must continue to be the sole agency responsible for accrediting pupils to the higher institutions. Modifications in its organization have been accepted by the senior high school itself and should in time be accepted by the higher institutions. The ability of applicants for college admission to complete a senior high school curriculum of the tenth, eleventh and twelfth years should be positive proof to college entrance boards that the pupils have successfully completed the propaedeutic junior high school curriculum."

In an attempt to throw more quantitative light on the desirability of considering only the grades for the tenth, eleventh and twelfth grades as a basis for entrance to college, the records of 283 freshmen students at the University of Wisconsin who had graduated from Wisconsin high schools having the six-three-three plan of organization were studied.¹ This group of students represents the period 1924-29, inclusive. The marks of these 283 students made during the three years of the senior high school work, namely, grades ten, eleven and twelve, were correlated with their grades made as freshmen at the University of Wisconsin, resulting in a correlation of $.758 \pm .01706$. The marks received as freshmen were then correlated with the marks received the ninth year of the junior high school and the last three years of the senior high school.

In this study there seems to be further evidence favoring the utilization of senior high school marks alone as a basis of college entrance. If studies in other institutions show similar results, the desirability of certain administrative changes should be considered most carefully by all colleges and university administrators.

¹Hess, W. E., *The Senior High School as a Single Basis for College Certification*, Master's thesis, University of Wisconsin.



Order from your
Supply Man or
write for booklet,
"School and Col-
lege Cleaning."



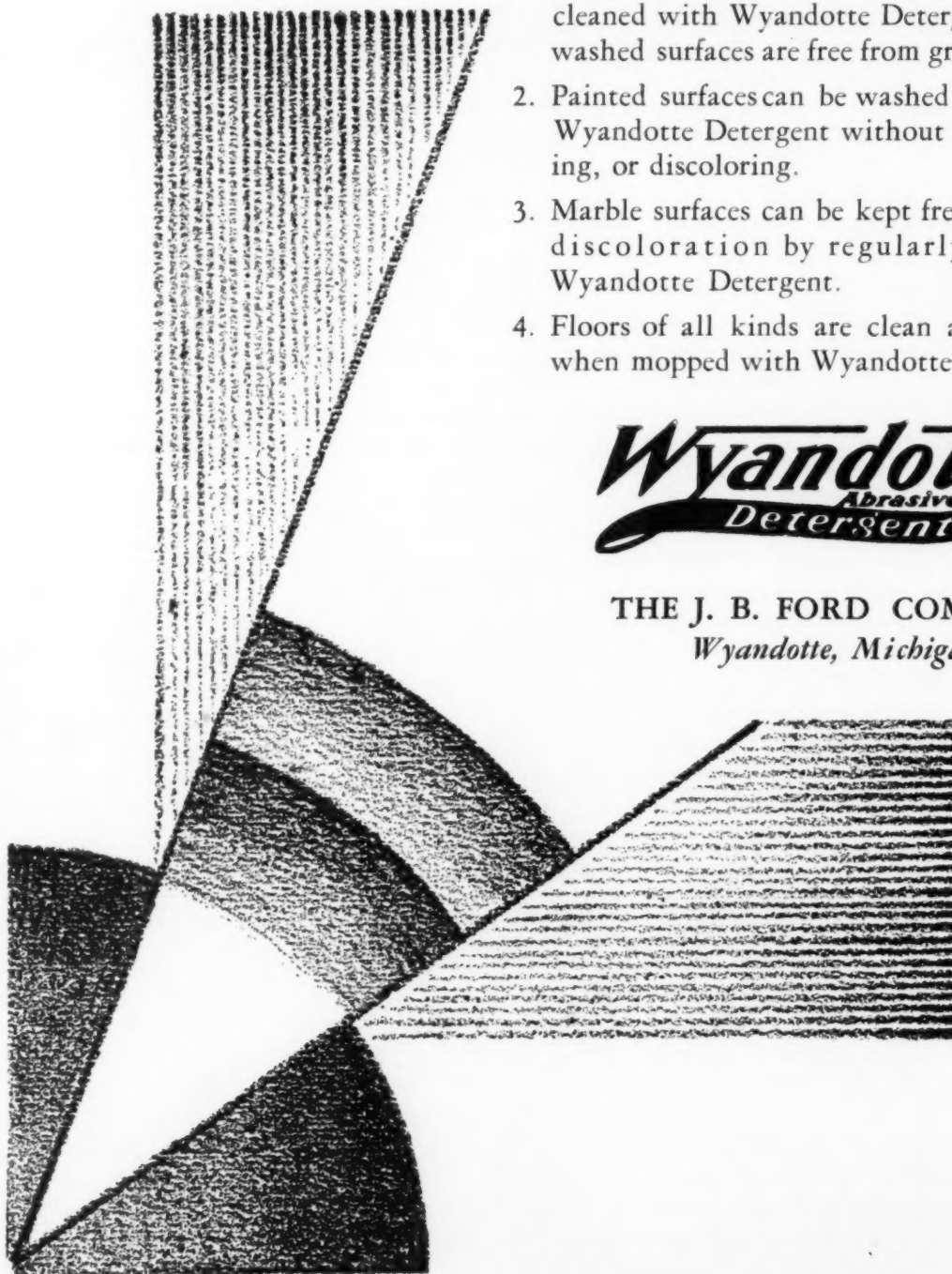
It Does All Four!

EFFICIENT school cleaning can be secured only when your cleaning material can be used for all four kinds of maintenance cleaning, and when it does its work thoroughly, speedily and safely. These are the reasons schools have so generally selected Wyandotte Detergent for maintenance cleaning:

1. Tile and enamel surfaces stay clean longer when cleaned with Wyandotte Detergent. Wyandotte washed surfaces are free from greasy films.
2. Painted surfaces can be washed repeatedly with Wyandotte Detergent without scratching, dulling, or discoloring.
3. Marble surfaces can be kept free from stain and discoloration by regularly washing with Wyandotte Detergent.
4. Floors of all kinds are clean and non-slippery when mopped with Wyandotte.

Wyandotte
Abrasive
Detergent

THE J. B. FORD COMPANY
Wyandotte, Michigan



Practical School Administration: Diverse Economies That Mean Money to the System

By PHILIP C. LOVEJOY, Formerly Assistant Superintendent of Schools, Hamtramck, Mich.

ONE of the difficult tasks in the operation of a school system is to divorce the emotional from the practical.

Into any discussion of ways to save money in the schools, there enters the topic of paying teachers when they are ill. How much of this should be done? Shall the beginning teacher be granted as much sick leave as the experienced teacher? Shall she, who is ill an intermittent number of days each year, be retained in the service? How much cumulative leave shall be allowed?

The emotional naturally enters this field when any study is made. In a school system where a doctor's certificate is required for three or more days of illness, it is remarkable how much illness is of two days' or less duration. If ten days are allowed during the year, it is to be noticed that few teachers exceed this ten-day allowance. Perhaps that number has been determined as the optimum for that locality and that particular type of teacher.

There is another factor, of course, that enters this problem. If ten days are the maximum allowed with pay, many a teacher who is ill more than the ten days will return to school before she is well, although such a move may be unfair both to herself and to her pupils. Of course, if this be the case, the question is raised on the other side as to how much illness may reasonably be expected with or without pay.

Paying the Sick Teacher

The board wants to be fair to its teachers. It also wants to be fair to the pupils. It is unfair to pupils to expect them to be taught by a teacher who is ill—from the mental hygiene point of view as well as from that of the physical. Further, it is unfair to the pupil to have him subjected to substitutes too often, unless a regular period of rotation has been adopted.

When it is discovered that teachers take time off to do personal things and charge it to illness, a sympathetic attitude tends to disappear. The board is confronted with the problem of deciding how

much vacation for illness with pay is a rightful charge against the community. When it was announced in one system that teachers who had taken their ten days of allowance during the year would have to undergo physical examinations to ascertain whether they were physically able to withstand the rigors of teaching for the ensuing year, the illness during the succeeding month became almost negligible.

Health Insurance May Solve Problem

Possibly, after all, it is a function of the teacher herself to fortify herself financially against such periods of illness. Perhaps the community should expect her to take out health insurance, and the community appreciating the circumstances under which illness may be contracted, may determine to pay 25 per cent of the costs of such insurance, and thereby save money. The whole problem is one that must be investigated in each individual locality. At least here is a field where money may be saved and an improved service derived as a result. What do the teacher training colleges do about this problem of the teacher's health?

Mention has already been made of the school system that purchased second-hand laundry equipment at a cost of \$1,500, paid for the entire purchase and saved an additional \$2,000 in the first year. Likewise, a school system in Michigan purchased its own concrete machine with which it laid its own cement walks and poured its own cement walls. The machine more than paid for itself on the first job, and the ultimate costs were greatly reduced.

The same principle holds true in the purchase of other equipment. Possibly not so much in periods of depression as at other times do mercantile and industrial establishments replace equipment they consider obsolete with that which is more modern. Frequently this so-called obsolete equipment will serve a school system most adequately. At least, this field may well be explored.

One of the easiest ways to save money is to keep a record of the carboys, the drums and the con-



Open all wardrobe doors *at once!*

Many convenience features of R-W school wardrobes:

SAVE FLOOR SPACE . . . You can get these new style R-W wardrobes complete for "built-in" construction or to fit existing needs. Doors open inward without taking floor space or interfering with wraps.

VENTILATION . . . Air currents pass under and through R-W Wardrobes carrying odors, dampness and germs from clothing.

HEATING . . . Wardrobes are heated by classroom radiators, eliminating need for additional heating units.

SAFETY . . . Clothing is safe from pilfering or disturbance because wardrobes are within the classroom.

MULTIPLE ACTION DOORS . . . All wardrobe doors are connected in series by R-W hardware so that a child may

open or shut all doors by operating only one. Built to accommodate as many pupils as the room capacity.

OPERATION . . . Special designing by R-W doorway engineers assures continued quiet, easy, trouble-free operation.

CONSTRUCTION . . . R-W Compound Key Veneered flush or panel doors may be obtained, guaranteed against warping, swelling or the effects of hard usage.

INSTALLATION . . . Responsibility for complete wardrobe installation is assured by Richards-Wilcox.

WRITE . . . Send for the catalog illustrating many types of wardrobes, and call upon an R-W doorway engineer at any time for a consultation upon your doorway problem.

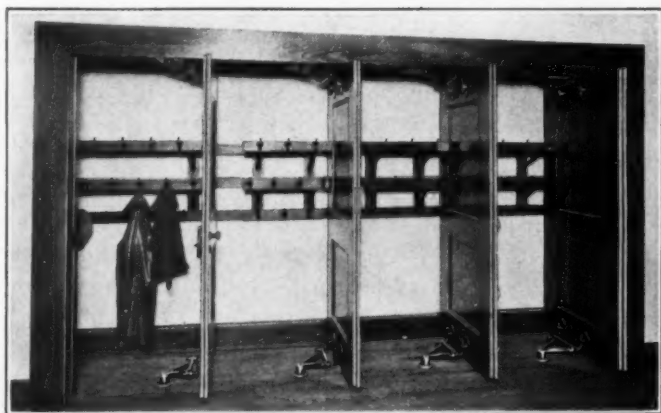


Richards-Wilcox Mfg. Co.

"A HANGER FOR ANY DOOR THAT SLIDES"
AURORA, ILLINOIS, U.S.A.

Branches: New York Chicago Boston Philadelphia Cleveland
Cincinnati Indianapolis St. Louis New Orleans Des Moines
Minneapolis Kansas City Los Angeles San Francisco Omaha
Seattle Detroit Atlanta Pittsburgh Milwaukee
Richards-Wilcox Canadian Co., Ltd., London, Ont., Montreal, Winnipeg

50
years
1880-1931



Illustrated above: Unit type wardrobe built in series for pupils and teacher to meet any requirement.

tainers that are returnable. If a paint drum is received at a special billing of \$6 subject to return, it behooves the supply department to keep a string on that particular drum rather than let it go to a hopper of old drums that sell for fifty or seventy-five cents. The same is true for acid carboys and for drums on which wire is purchased. This is simply a process of directed salvage.

Of course, an essential way to save money is to get all the money that is coming to the school district when it is collected. Thus the greatest use may be made of the money—loans may be considerably reduced and more interest obtained.

Diverse Ways of Saving Money

Certain school systems with large campuses have done some experimenting with cooperative heating as far as their own buildings were concerned. It seems to me that this field has not been thoroughly explored and that saving can ensue from such a project. There would seem to be no reason why the school system should not sell centralized heat to houses in the neighborhood of the school. Furthermore, it may be possible to heat schools not too far distant from a centralized plant.

Need anything be said about saving money through the elimination of graft? It is absolutely necessary for the executive to think up every conceivable means whereby money might be stolen in his system and then to block every such loophole definitely and adequately.

The matter of traveling expenses offers an excellent example. How shall the executive know that the bill submitted is exactly what it ought to be? Presumably he must trust the individual who files it, but padding might possibly be reduced if the statement had to be notarized or else substantiated by receipts.

A school system should plan to pay for equipment as it is purchased. Prices under such conditions are always cheaper and interest is saved. The pay-as-you-go policy is simply good business.

Some schools have ascertained that they can obtain fleet prices for their busses and automobiles, especially if they combine with the city in making their purchases.

This list is not exhaustive, but it serves to indicate some of the ways in which money may be saved. The times through which we have been passing recently have not been overjoyful; yet when properly viewed they have been of tremendous value. They have served to make every industry check carefully before any step is taken. Likewise, they have been valuable to the school man since he, too, has been forced to plan scientifically. Educational procedure without a doubt has become more practical.

How School Systems Regard the Married Teacher

Married women are barred from teaching in the public schools of more than 50 per cent of representative American cities, it has been announced on behalf of the Office of Education.

The Office of Education sent inquiries to a number of cities with populations over 30,000 and from 171 replies found that half of them had some rule forbidding the appointment of new women teachers who are married.

The National Education Association had previously found from more than 3,000 towns and cities that a majority of them did not allow a married woman to continue in her employment as a teacher.

Arguments of all kinds have been proffered to bar women and in recent years attempts have been made through scientific investigation to ascertain the facts. From 954 superintendents, for example, 597 or 63 per cent testified that they found married women as efficient as the unmarried ones. Four per cent of the superintendents reporting declared that the married ones were more efficient.

Many arguments opposing the appointment or continuation of married women as teachers are economic. It is asserted that with husbands earning sufficient income, these women prevent unmarried women from having a necessary income. Other arguments center upon the divided interests of the married teacher between her home and her work in the school.

Penalizing Teachers for Marrying

In recent years the whole question has come before educators forcibly. Married women challenge the arguments and declare that by disallowing them to continue their profession for which they are trained, they are in fact being penalized for marrying. This they declare is contrary to good ethics.

The Office of Education found that 57 American cities with a population in excess of 30,000 require a woman to give up her position at once when she marries. The National Education Association has reported that 34 per cent of 66 cities with a population over 100,000 require them to resign at once also. In its study in reference to this same question, nearly 30 per cent of 161 cities with a population above 30,000 have the same rule, nearly 30 per cent of 326 cities with a population between 10,000 and 30,000 and 24 per cent of 397 cities whose population is from 5,000 to 10,000. More than 25 per cent of 1,532 cities whose population is between 2,500 and 5,000 likewise require a single woman to resign immediately after marrying.

THE GREAT DISASTER OF 1931

(A Clipping from the "Daily Microbe")

EXTRA

**60,000 KILLED
500,000 INJURED
ENTIRE COLONY DESTROYED**

A last minute dispatch to this newspaper records a new disaster of terrifying proportions, completely eclipsing that of a year ago. Without any warning whatsoever the microbe colony in the exclusive Maple Heights School was completely devastated with tremendous loss of life. One of the few survivors reports that the linoleum layers arrived promptly at 8 a. m. Saturday. By mid-afternoon not a living microbe remained in the once fashionable colony. The list of dead is still incomplete.



This informative book, "Linoleum—What It Is—How It Is Made," contains a wealth of information of interest to School Boards. Obtain your free copy by addressing Advertising Department, W. & J. Sloane, 577 Fifth Avenue, New York.

To the microbes, the laying of W. & J. Sloane Linoleum in the Maple Heights School was a disaster of the first degree. To more enlightened individuals it represents merely another step forward in the cause of school sanitation.

School boards in all sections of the country are turning to W. & J. Sloane Linoleum as an economical and sanitary solution of their floor-covering problems. W. & J. Sloane Linoleum is especially effective against microbes. Extra grinding of ingredients, plus 32% extra pressure in the calender rolls, gives it an unusually smooth, lasting surface. Double-waxing at the plant insures long life with a minimum of care. W. & J. Sloane Mfg. Co., Trenton, New Jersey.

W. & J. SLOANE LINOLEUM

Schoolhouse Planning:

Disposing of the Present Plant

By ARTHUR B. MOEHLMAN, Professor of School Administration and Supervision, School of Education, University of Michigan

APPRAISAL of the existing school plant has resulted in a four-way classification of buildings. This classification includes: (1) the units, building and site that will satisfactorily fit into the ultimate plant without change; (2) units that will fit the future plant with changes in the size of the site, in terms of some possible use, and with possible additions or through remodeling; (3) units that will not form a part of the future plant but which may be allowed to exist for a number of years, and (4) units that must be abandoned as soon as it is physically possible to do so. Although only the first two groups of units will be a part of the ultimate plant, it is necessary in the development program to consider the means by which the second two groups may be progressively eliminated.

The Problem of Replacement

The first question to be given serious consideration is the best means for disposing of Groups 3 and 4 in the existing plant. Any typical community of moderate or large size that has pursued a *laissez faire* policy with respect to the school plant will find upon making a survey that it faces not only the problem of providing facilities for new growth but also the necessity for replacement or enlargement. Replacement may be necessary because the buildings are actually worn out, but more generally it is required because of obsolescence due chiefly to the errors in planning of a previous generation to whom flexibility was unknown and who considered expansibility unnecessary. Again replacement may be necessary because of a type of construction that constitutes too great a fire hazard. The other reasons for replacement were considered at some length in an earlier article on appraisal of the existing plant.¹ Whatever the causes, practically every community faces this disposal problem at the time of its first complete school plant program study.

Theoretically, the desirable action would be immediate disposal of Group 4, or those buildings that are a menace to life and that are in such a

condition physically and instructionally that they are no longer desirable for use. Practically, such a procedure is impossible for several good reasons. Since the public school is a continuing activity and constant provision must be made for the care of the children units cannot be disposed of until replacements have been made. The first practical obstacle to immediate replacement would be conditioned by the exact time required to replace a unit. If only one or two units are involved this time element might be only a year or two. In the larger centers, however, where these problems have been allowed to pile up, the time element of replacement, other conditions being eliminated, may stretch into years.

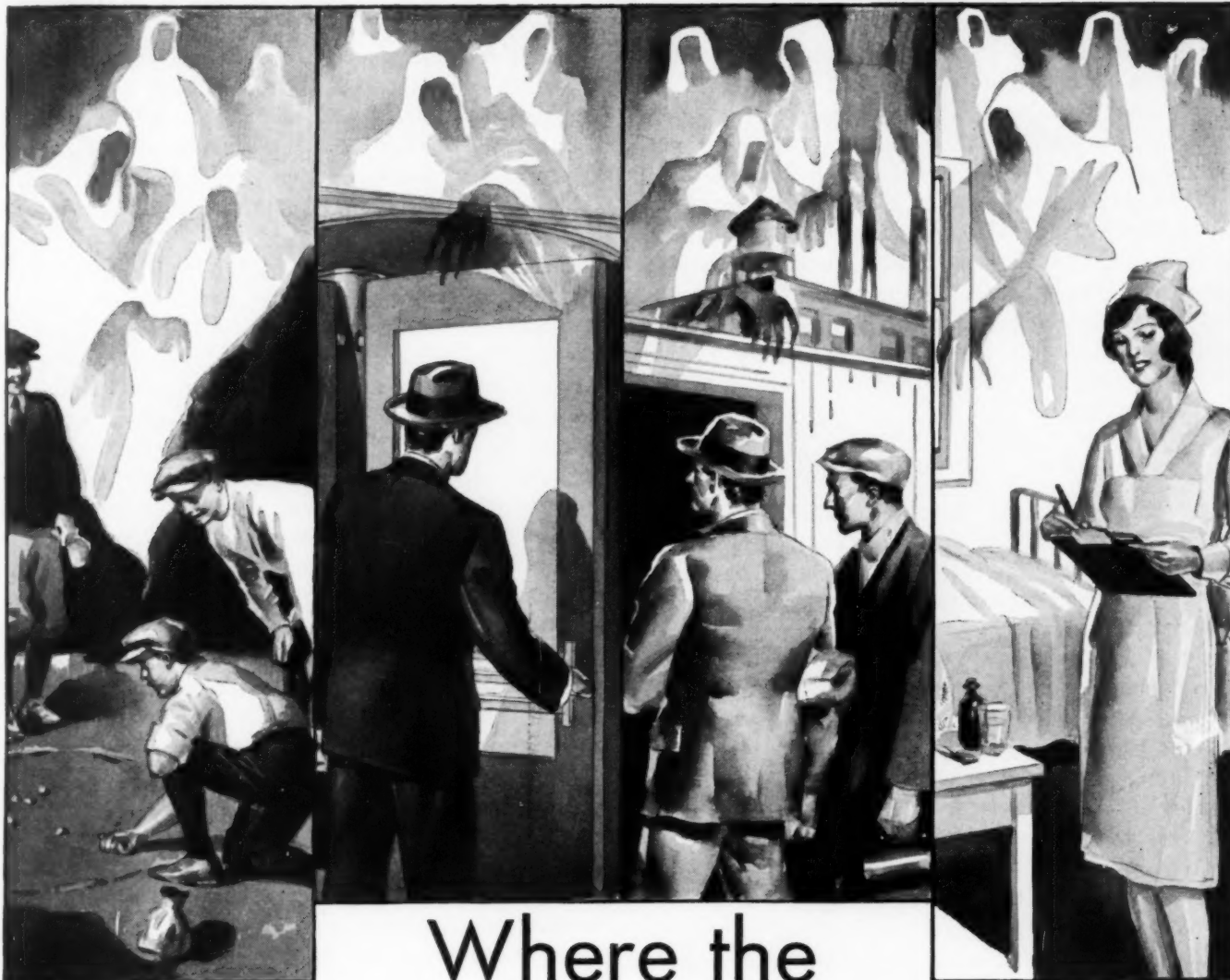
Conditions in a certain large city may be given as an illustration. The first complete school plant survey revealed the fact that fifty-two of its 124 buildings were in Groups 3 and 4 and thus were subject to replacement. Fully one-fourth of these fifty-two buildings were distinct physical hazards with respect to both panic and fire. It is obvious that if the time factor of replacement alone was considered, it would require at least ten years to replace these buildings. Theory is therefore immediately modified by the time required for rebuilding.

Finance a Factor in Replacement

The second factor to be considered is finance. No community could or would be willing readily to undertake a replacement program at a given time. Even if growth were stationary, an immediate solution of the problem already quoted would be impossible. If a third factor, the need for annual growth, is added, the impossibility of the theoretical assumptions is obvious. Situations in which the rapidly declining child population makes it easy to close a unit and care for a small number of pupils in some neighboring unit would be exceptions to this rule.

The first study with respect to the elimination of old units should be a subclassification of each unit in terms of safety, need and mechanical condition. Since all units cannot be discarded or made over at once, it appears reasonable to start on the

¹Moehlman, Arthur B., *Appraising the Existing School Plant*, The NATION'S SCHOOLS, vol. 7, p. 84, March, 1931.



Where the Deadly Legions Gather He Fights Your Battle

Every school, industrial plant, hospital, public building and similar place where humans gather is a potential rallying ground for the unseen legions of mankind's greatest enemy.



Wherever sanitation may be an acute problem, the Clow Soldier of Sanitation is your logical ally. Call him in. With his long experience and his complete line of specialized fixtures he naturally is, and can afford to be, unbiased in his ideas. This is George Weiss, Highland Park, Ill.—Northern Illinois Territory.

To "defeat" the germs that make up this army—and to lower the costs through the years—through proper plumbing facilities, has been the job of the Clow Sanitation Soldier since 1878.

It was a Clow Man who was called into a prominent Southern city when Typhoid had all but won the battle.

It was a Clow Man who was drafted into Cuba as an important ally against the deadly legions of Malaria.

Today these Clow Soldiers of Sanitation carry on, less spectacularly, but even more scientifically and effectively. They have

developed the Clow-Madden Automatic Closet for schools and public places. They have given us the sanitary drinking fountain. And they have developed a wide variety of fixtures to meet special and dangerous sanitary conditions

52 years of experience in the battle against pollution, ill-health, and uncleanness give the Clow Soldiers unmatched knowledge of mass plumbing needs.

The largest line of specialized fixtures, carefully built, help them help you to meet any requirement no matter how specialized or acute.

CLOW

CHICAGO

PREFERRED FOR EXACTING PLUMBING SINCE 1878

Consult your architect

poorest cases first. Those for which there is no longer a need might be closed at an early date, those that form a direct menace to life may be considered next and those that present poor mechanical or instructional conditions would follow. After this tentative rate of abandonment has been determined, it is necessary to pass to the consideration of other factors such as remodeling, enlargement and new centers. Not until all of these needs have been specifically determined and related to finance will it be possible to arrive at a final recommendation with respect to Group 4 of the present plant.

Safeguarding the Pupil

At this point it may be well to point out a weakness of the high pressure educational campaign generally associated with school plant programs. This type of education depends for its success upon the creation of a distinct emotional appeal. In no way is it so easy to interest the public in new plant changes as to point out the physical danger to which children are exposed while working and playing in buildings that are a fire hazard. Several campaigns have come to my attention in which this condition was emphasized to the point of creating hysteria. Since panic is a far more potent source of danger than fire, for psychologic reasons it is well not to stress the lack of fireproofness in certain structures. They cannot be changed overnight and the mental reaction created will do more harm than a continuation under existing conditions. This feature will be discussed in greater detail in a later article concerned primarily with certain aspects of community education.

The next classification to be considered carefully is that in which buildings may be allowed to work out their economic life or serve until the community demand for them ceases. These buildings, whose membership in the group has been determined by careful study of population and economic trends, may now be restudied and reclassified in accordance with how well they satisfy safety requirements. If they are fire risks that are likely to be used for several years, it is essential that adequate provision be made for rendering them safe for use during that period. There are many devices and materials available to-day that may minimize to a large degree the most serious fire hazards. The building of fire walls or fire stops, the inclusion within or without the shell of carefully enclosed fireproof stairways rather than open fire escapes and the elimination of third stories and rooms that have no direct corridor access, are all reasonable means of diminishing hazards. If these structures are to be used for a

period of five years or more, it may even be wise in certain cases to modernize plumbing and heating facilities. These physical requirements must be carefully studied and a tentative schedule of requirements developed for later consideration with respect to the entire problem of ultimate plant needs.

The second classification, including those buildings that will serve as units in the ultimate plant with certain changes, must next be studied. These may be grouped according to the type of change required. The first classification would include those units that are satisfactory in every respect except the size of the site. Each site must then be surveyed with respect to enlargement. All possibilities may be studied and a series of tentative recommendations, together with their probable cost, developed. These recommendations should be based upon and supported by completely descriptive land maps.

The second subgroup within this classification may include those buildings the fundamental use of which will be changed. Certain elementary plants may be so located that their future use will be in a secondary or specialized field. Certain secondary schools may be unsuitable for their original purpose with respect to location and should be assigned to the type of use that will best fit the ultimate plant. If the use of buildings is changed, the remodeling requirements may be also established and tabulated at this time. The third and fourth subgroups will require internal changes or additions. In the case of additions careful study should be made of the future possibilities of each district so that the ultimate plant may be determined. Additions will then be built in terms of a complete future plant in which the existing structure is only a part that may be replaced whenever necessary without disturbing the newer structure.

The first group, including those buildings and sites that will fit into the ultimate plant without change, may be added to the ultimate plant plan without further comment.

Preparing a Schedule

After the second major operation, the best disposal of the existing plant, the executive should have a tentative schedule for each classification and subclassification. The third and fourth groups may be tabulated by years in the form of a progressive elimination table. The factor of judgment enters largely into the preparation of these schedules. The interpretation of available facts and their evaluation with respect to need must be considered solely as based on judgment and not as an inflexible classification. Three specialists work-

Von Duprin

Self-Releasing Fire and Panic Exit Latches

The Golden Investment

When you ask your architect to specify Von Duprin devices you are making the finest type of investment that can be made.

You are buying both satisfaction and sure profit.

You can rest content in the knowledge that the occupants of the building are protected by the best known safeguard against panic fatalities, that everything possible has been done to make safe exit certain at all times.

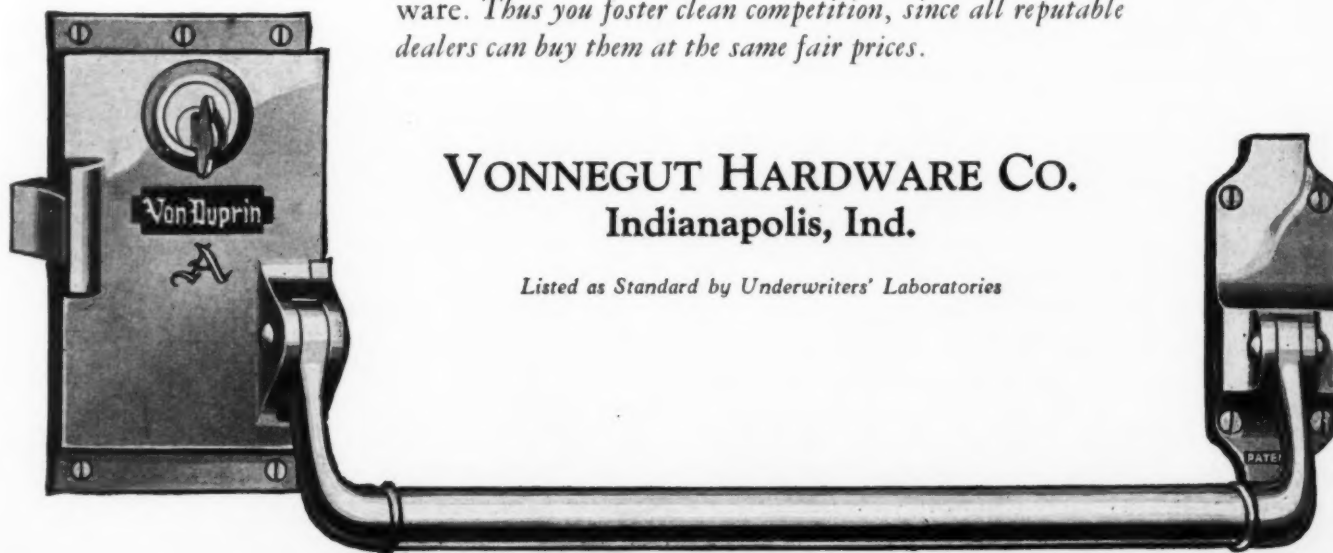
Catalog 28V shows a Von Duprin device for every purse and every purpose. Or see Sweet's, Pages C3892-C3896.

You are securing a goodly profit in the practical elimination of upkeep expense over the life of the devices. You will invest more in Von Duprins than you might otherwise spend, but your cost per year will be far less.

To make sure of getting Von Duprin devices, we suggest that you ask your architect to specify them by name and as an item separate from the finishing hardware. *Thus you foster clean competition, since all reputable dealers can buy them at the same fair prices.*

VONNEGUT HARDWARE CO.
Indianapolis, Ind.

Listed as Standard by Underwriters' Laboratories



ing independently might reasonably consider these factual data and might formulate elimination schedules that would be quite different for a time span.

No hard and fast rules can be laid down for such a determination. The educational policies, the community tradition, the presence and effectiveness of a public relations program, the potential financial ability and new growth are all factors that must be given consideration. The same general situation may be developed quite differently, according to community type and conditions. No standardized technique can be developed. General principles may be set forth but the actual application will vary directly with need. Frankly, there is no particular call for standardization. There is more need for flexibility and variation in accordance with a given situation. Standardization has its value in certain activities and under certain conditions, but the development of the school plant program is not essentially in this category.

Every movement toward a more objective consideration of problems and toward the development of a generalized technique has its minor followers who lack both imagination and grasp of the fundamental problem, the satisfaction of instructional needs, and who attempt to apply the technique blindly and dogmatically far beyond its possible limits. Such practice cannot help but be harmful over a long period and cannot be too strongly decried.

With the completion of the elimination schedules and the adjustment (enlargement and remodeling) schedules, the executive may now proceed to the third major step in ultimate plant determination, the best location of new school centers.

The Importance of Soap and Water in the School Program

The statement has been made that "the schools reflect the ideals of the community." On this premise the schools of to-day should have every facility for personal cleanliness, not only that the old Latin saying "*Mens sana in sano corpore*" may be justified, but because all research seems to indicate that not only are esthetic ideals more readily realized, but what is more important, epidemics of many transmissible diseases are greatly reduced by such a simple expedient as soap and water washing.

A recent survey, however, shows that many schools do not provide soap in any form and are otherwise inadequately equipped to permit the in-

dividual pupil to observe the simplest fundamentals of cleanliness, namely, keeping at least his or her hands clean. Such conditions should not be condoned and can be attributed partly to a lack of interest on the part of manufacturers of these commodities. Some school officials have made extensive studies of health problems and their relationships to attendance and many others are awakening to the effect these deficiencies are having upon the pupils committed to their care. Some schools are models in this respect, having provided handwashing facilities that compare favorably with those available in our so-called average American home. They see that provision is made not only for running water, but for soap and towels as well.

Providing for Hand Washing

Facilities for hand washing can be treated under the following headings: plumbing, water supply, soap and towels.

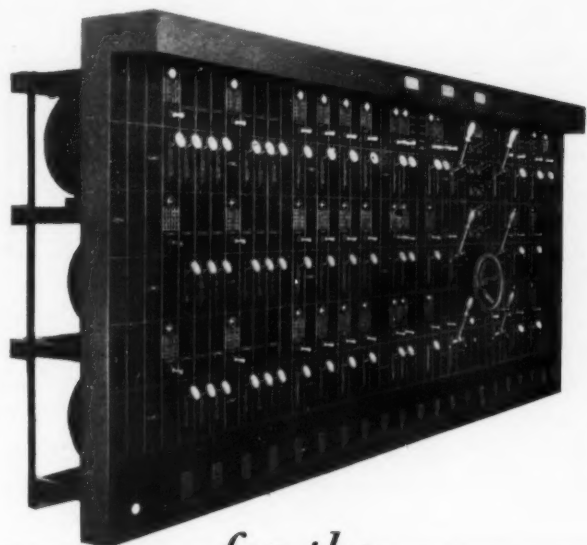
Soaps for use in schools can be in either cake, liquid or powdered form. All three types find use in some school systems. Each type has its particular advantages.

Bar soap being in the form most familiar to the small child has less novelty and is therefore less apt to be misused than any other form. Soap in full size cakes will be useful almost anywhere, particularly in smaller systems and in some districts of the larger ones.

Liquid soap has been used for some years and when dispensers are kept filled this type of soap will be practical. Liquid soaps as a rule are diluted by the service janitor and are often made useless by such a procedure, particularly when hard water is used in place of soft or distilled water. The ever present idea of cutting costs has brought about the introduction by some less scrupulous individuals of liquid soaps of poor quality. Instead of laying this poor quality at the door of the individual manufacturer (overzealous to meet prices) all liquid soaps are condemned as "no good." Such should not be the case.

The newest soaps for use in individual dispensers are powdered soaps. Soaps of this type assure unvarying quality at the dispenser, because the service janitor cannot successfully dilute or mix them with some type of inert material to make them last longer.

The principle factors or problems involving "clean hands" for the individual pupils, therefore, are as follows: a recognition of the desire for clean hands; the proper facilities for hand washing; the allotment of time for hand washing; the selection of soap; the maintenance of equipment and supplies.



for the
**School Auditorium
Lighting Control**

Safe • Flexible • Efficient

The **FA** Major System is the lighting control used by nearly all modern theaters throughout the country. On a modified but no less efficient scale it is used in many schools as well, for it provides safe lighting control for all auditorium and stage activities.

Send for complete literature and estimates—both gladly furnished without cost.

**Frank Adam
ELECTRIC COMPANY**
ST. LOUIS

Albuquerque, N. M.
General Engineering &
Equipment Co.,
108 N. Third St.,
P. O. Box 76
Atlanta, Ga.
L. A. Crow,
64 Cone St., N. W.
Baltimore, Md.
Wolfe-Mann Mfg. Co.
312 S. Hanover St.
Boston, Mass.
J. J. Cassidy,
231 Congress St.
Buffalo, N. Y.
Ralph E. Jones,
137 Saranac Ave.
Chicago, Ill.
Major Equipment Co.,
Inc.
4603 Fullerton Ave.
Cincinnati, Ohio
E. F. Schurig,
105 East Pearl St.
Cleveland, Ohio
Frank Reske,
684 The Arcade
Dallas, Texas
R. S. Wakefield,
1814 Allen Bldg.
Denver, Colo.
Fred E. Staible, Inc.,
2356 Blake St.
Detroit, Mich.
H. H. Norton,
2663 Wabash Ave.

Kansas City, Mo.
Robert Baker,
19 E. 14th St.
Los Angeles, Calif.
E. Zinsmeyer,
1127 S. Wall St.
Memphis, Tenn.
C. B. Rutledge,
203 Monroe Ave.
Minneapolis, Minn.
Leo H. Cooper,
422 Builders' Ex. Bldg.
New Orleans, La.
W. J. Keller,
203 Natchez Bldg.
Magazine & Natchez Sts.
New York
Fred G. Kraut,
419 W. 54th St.
New York City
Omaha, Nebr.
B. J. Fleming,
213 S. 12th St.
Philadelphia, Pa.
W. A. MacAvoy, Jr.,
244 North 10th St.
Pittsburgh, Pa.
Wm. A. MacAvoy, Jr.,
Dist. Mgr.
R. E. Thomas,
Res. Mgr.
P. O. Box 1349

St. Louis, Mo.
O. H. Rottman,
3650 Windsor Place
San Francisco, Calif.
Lee Van Atta,
340 Fremont St.
Seattle, Wash.
R. E. Dryer,
91 Connecticut St.
Tulsa, Okla.
P. E. Ebersole,
214 S. Victor St.
Toronto, Can.
Amalgamated Elec.
Co., Ltd.
Gen. Sales Office,
372 Pape Ave.
Vancouver, Can.
Amalgamated Elec.
Co., Ltd.
Granville Island
Winnipeg, Man., Can.
Amalgamated Elec.
Co., Ltd.
677 Notre Dame Ave.
Calgary, Alberta
Amalgamated Elec.
Corp.
1301 11th Ave., East
Hamilton, Ont.
Amalgamated Elec.
Co., Ltd. 18 Mary St.
Montreal, Can.
Amalgamated Elec.
Co., Ltd.
1006 Mountain St.



**This is the
Bracket**
that hammers down
Toilet Partition
Costs



Erection costs and permanency should be considered before toilet partitions are purchased. The partition that is designed for easy and permanent installation will reduce the gross cost even though purchased at a slightly higher quality price.

As an example of ingenious designing, we present the *new* Mills 2-piece Wall Bracket. The pieces are adjustable horizontally or vertically and provide a rigid support from the wall. The wall plate is wide enough to give ample strength and at the same time cover unsightly screw holes or plaster breaks. After panel is placed in position, the bracket is tapped into place, rigidly locking the panel to wall and positively preventing loosening of wall connections.

This Mills Partition feature makes erection a one man job — and definitely reduces your partition costs.

See Sweets catalog for details or write for the two New Toilet Partition Bulletins.

THE MILLS COMPANY

"A Mills Metal Partition for Every Purpose"

Offices — Factories — Toilets — Showers — Dressing Rooms

906 WAYSIDE ROAD, CLEVELAND, OHIO
Representatives in All Principal Cities

MILLS METAL
TOILET PARTITIONS

News of the Month

Music Appreciation Hour Series to Start October 9

With arrangements completed for use of the largest transcontinental network of stations yet assigned to it, active preparation is under way for resumption of the Music Appreciation Hour series on October 9. Sixty-one stations will carry the program. The series will be under the direction of Walter Damrosch.

More than 56,000 instructor manuals will be distributed shortly to scholastic institutions all over the country. Many new features have been incorporated in the manual, including a list of suggestions to teachers regarding classroom reception technique for the series. These suggestions were prepared by Dr. Will Earhart, director of music in the public schools of Pittsburgh, Pa., and chairman of the advisory board for this broadcast feature.

An orchestral seating plan, a schedule of concert dates, a list of the network stations, descriptive notes on all compositions to be performed, an extensive bibliography and index of compositions listing the catalogue numbers of all available phonographic recordings as well as music material available for school orchestras are included in the manual.

World Recreation Conference to Be Held in Los Angeles in 1932

Informal invitations to attend the First International Recreation Conference have been sent to all countries by American diplomatic officers, according to an announcement by the Department of State.

The conference is to be held at Los Angeles in July, 1932.

The Department of State, in compliance with the request of the National Recreation Association, has authorized American diplomatic officers to transmit the invitations to the governments to which they are accredited.

The National Recreation Association, a body having an interstate directorate and headquarters

in New York, has been accustomed to meet annually in furtherance of the purposes for which it was founded as the Playground and Recreation Association of America. The association now proposes to hold at Los Angeles, Calif., July 23 to 29, 1932, the First International Recreation Congress.

This congress will consider the problem of providing, for persons of all ages and tastes, opportunities for play, recreation and the recreational use of leisure. Such aspects of the problem will be discussed as programs, facilities and direction for public parks and playgrounds, for games and athletic sports, for camping, handicrafts, musical and dramatic entertainments and other recreational activities.

Further information and additional or later announcements may be obtained from the secretary, Recreation Congress Committee, National Recreation Association, 315 Fourth Avenue, New York.

Schools Invite Communities to Take Part in Education Week

The eleventh annual American Education Week will be observed November 9-15. The program is sponsored as it has been for a decade, by the United States Office of Education, the American Legion and the National Education Association.

The purpose of American Education Week is to interpret the aims, needs and achievements of the schools.

For emphasizing the significance of the schools in community, state and nation, the American Education Week program for 1931 is planned around an appropriate theme, "What the Schools Are Helping America to Achieve."

A principal purpose of American Education Week is to draw home and school closer together as the chief builders of high standards of ethical conduct for the present and for the future.

The program of American Education Week is planned to magnify the esteem in which the American people hold their schools and to invite all citizens to contribute toward still greater achievements.

WINNER

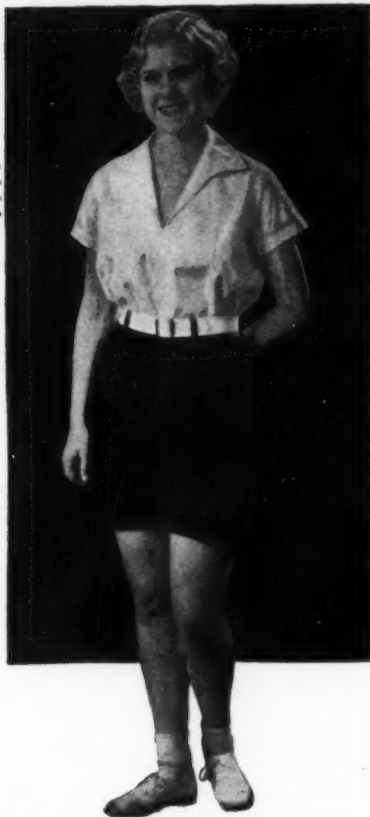
styles meet every gym-suit need!

**IMMEDIATE
DELIVERY** on our
Standard Stock Suits

*Two-piece suit shown at
right, in black and white
... all blue or all green.*

*One-piece suit shown be-
low may be had in blue
or green.*

*These are two of several
models which time has
proved most practical
from every standpoint.*



**THIS
IS NO TIME FOR SCHOOLS TO
CONSIDER CHANGING STYLES!**



WHATEVER your gym-suit need,
there is a practical, comfortable,
economical **WINNER** suit to meet it.

Years of experience in the manufacture
of athletic clothes for girls have resulted
in certain styles of **PROVEN** practical
merit. Years of effort to reduce manu-
facturing costs and improve the suits
have resulted in definite savings to stu-
dents and their parents.

Principals, Superintendents and Physi-
cal Directors who have the best inter-
ests of their pupils at heart, will see the
folly of insisting upon specifications
having little or no importance... which
cannot help but slow up production,
increase the cost to the student... and
confuse the merchant... without adding
in any way to the comfort, smartness
or wearing qualities of the suits.

Before you decide on athletic clothes
for your classes, send for samples of
"Winner" suits... have them tried on...
examine the quality... and compare the
value! Then you will understand why
leading schools all over the country
are demanding standard "Winner" suits!

Catalog in colors on request

E. B. MYERS COMPANY, Ltd.
511 Venice Boulevard Los Angeles, Calif.



Here Is a True Expression of Leadership

ILLUSTRATED is the Century Semi-Recessed Drinking
Fountain. Created by Century Artists over a year ago,
it has won a Nation wide acceptance. Exquisitely pro-
portioned, it harmonizes well with wall masses. Styled
in the modern manner, it adds a striking bit of detail.
Its unique design is particularly adapted to corridors,
and provides free passage way even in the narrowest
halls. It serves its purpose well.

Equipped with the famous Century Automatic Bubbler
Head, it is undoubtedly the most efficient in all America.
Invented nearly three years ago, this Automatic Bubbler
Head has created a new standard of sanitation. Connected
direct to line pressure, it automatically maintains a
normal, wholesome drinking stream. Volume controls
and other hand operated devices are unnecessary. It is
truly Automatic! Each turn of the handle produces an
amazingly smooth, convenient drinking stream.

Century Engineers have created both a new standard of
beauty and efficiency. Century Fountains have scored a
national success. This is a true expression of leadership.

CENTURY BRASS WORKS, Inc.
900 NORTH ILLINOIS ST. BELLEVILLE, ILLINOIS



News of the Month (Cont'd)

Superintendents to Meet in Washington in 1932

The next meeting of the Department of Superintendence will be held in Washington, D. C., February 20 to 25, 1932.

More than 3,000 rooms have already been reserved.

Registration and exhibits will be in the Washington auditorium. General sessions will be held at Constitution Hall and Continental Memorial Hall.

Requests for hotel accommodations should be forwarded to Augustus Gumpert, director, Washington Convention Bureau, 1730 H Street, N. W., Washington, D. C.

Prof. H. A. Hollister, Well Known Educator, Dies

Horace Adelbert Hollister, emeritus professor of education, University of Illinois, died recently. He was the author of several works on education.

Professor Hollister, during a long service in educational activities, had served as superintendent of several school systems and as assistant state superintendent of schools in Missouri. Later he joined the faculty of the University of Illinois and in 1902 became state high school visitor. He retired in 1928.

Seventeen Specialists to Advise on Survey of School Finance

A committee of seventeen specialists has been appointed by Commissioner William John Cooper to act as consultants in the National Survey of School Finance being conducted by the Office of Education, according to a statement made public by the Department of the Interior.

Commissioner Cooper will direct the survey which has already been launched, with the assistance of Prof. Paul R. Mort, of Columbia University, who is associate director.

The school finance survey, authorized by Congress at a cost not to exceed \$350,000, is the third national educational study now being directed by the Office of Education, and the finance survey ad-

ministrative organization will be similar to that of the other two studies, the Survey of Secondary Education and the Survey of the Education of Teachers.

An appropriation of \$50,000 for the current fiscal year has been made for the school finance study.

School superintendents named on the list of specialists are N. R. Crozier, Dallas, Tex., and Orville C. Pratt, Spokane, Wash.

Summer Schools Spread Throughout the World

Summer schools, a distinctly American contribution to education, have now spread throughout the world, according to Walter J. Greenleaf, specialist in higher education, Office of Education.

Overemphasis of "credits" in the United States, however, has become an affliction that does not beset the European institutions of higher learning where attendance and proficiency rather than credits are stressed, Mr. Greenleaf points out.

In Europe, 118 institutions in fourteen countries offer summer courses, some of which are organized expressly for Americans. There are sharp differences between Europe and the United States on the point of credit for the work.

In Europe the certificates and diplomas are awarded for satisfactory attendance and for proficiency in subjects. Prizes are sometimes given, and often upon examination university diplomas are awarded. Credits are not stressed.

In America "credit" is the dominating note. It is a mistake, Mr. Greenleaf believes. Students demand college credit to shorten their residence requirements, or to gain a few points to boost materially their salaries as teachers, or to satisfy certain requirements laid down by their superintendents or school boards, if they are teachers in attendance. Summer credits are based on the length of the session.

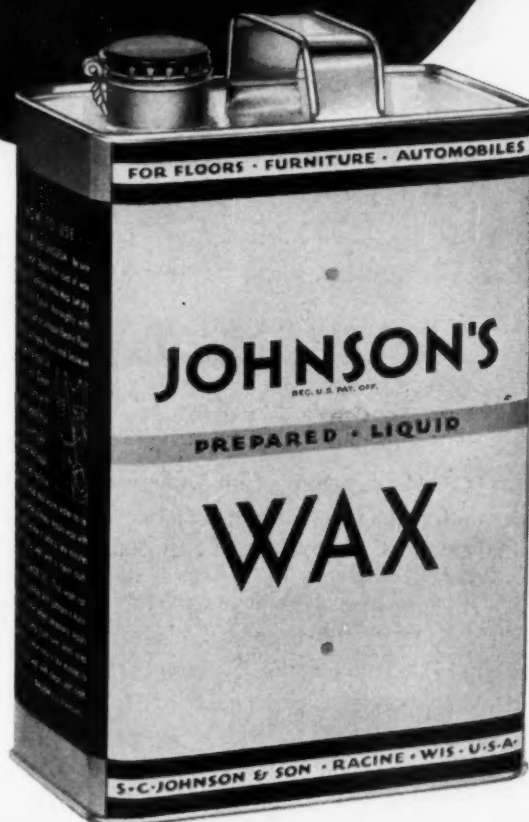
Approximately 350,000 students are enrolled usually in the elementary, junior high, and high schools of the nation during the summer. Elementary schools have the largest enrollment with more than 200,000, while the high schools are second in rank with more than 100,000. These children either attend summer courses to overcome some delinquency or handicap or seek to forge ahead in some branch of learning.

January. February. March. April. May. June. July. August. September. October. November. December

**EVERY MONTH
OF THE YEAR—
MAINTAIN YOUR FLOORS
WITH THE GENUINE**

- The Johnson's Wax method is the year 'round economical, efficient method of maintaining floors.
- Whether the floors in your building are wood, linoleum, composition, tile, cork—Johnson's Wax will give them longer life and keep them immaculately polished with the minimum of effort.
- Johnson's Wax floors never have to be scrubbed. Dirt can't become embedded in such a tough, mirror-like surface.
- With the Johnson Electric Floor Polishing machine one person does the work of six scrubwomen and does it much better. The maintenance cost is far less than with the old methods.

• A new 90-page book, 30 illustrations—"MODERN FLOOR FINISHING"—by F. N. Vanderwalker, Editor of Painting Age. This valuable book explains modern methods of floor finishing, involving the use of entirely new principles and materials. Send \$1.00 for your copy today.



• S. C. JOHNSON & SON, Floor Finishing and Maintenance Authorities, Dept. N.S.8, Racine, Wisconsin. Enclosed is \$1.00. Please send me F. N. Vanderwalker's 90-page illustrated book "Modern Floor Finishing."

Name _____

Address _____

City _____

State _____

In the Educational Field

RICHARD D. TUCKER has recently been appointed superintendent of schools, South Hadley, Mass., succeeding FREDERICK E. WHITEMORE, retired. Before his appointment DOCTOR TUCKER was superintendent at Ludlow, Mass.

WILEY H. PITTMAN has resigned as superintendent of schools, Edgecombe County, N. C.

E. R. ADAMS, superintendent of schools, Tarkio, Mo., is now superintendent at Chillicothe, Mo., succeeding G. E. DILLE who has become superintendent at Maplewood, Mo.

I. B. SOMERVILLE is the new superintendent of schools, Ridgewood, N. J., succeeding I. A. TRAVELL who resigned several months ago because of ill health. MR. SOMERVILLE was formerly principal of the Ridgewood High School.

ZACH W. SPRINGER is the newly elected superintendent for Ohio County, W. Va., succeeding JOHN H. LAZEAR.

PAUL S. AMIDON has been elected superintendent of schools, Litchfield, Minn.

W. SCOTT WARD is resigning the superintendency at Athol, Mass., after thirty-six years of service in that position.

HILDA KLINE MCPHERSON has assumed the duties of the superintendency of Leavenworth County, Kan.

MYRTLE JAMISON, superintendent of schools in Louisa County, Iowa, for thirteen years, died recently. MISS JAMISON resigned last fall because of ill health.

JOSEPH R. MILLER is the new superintendent of schools, Beaver, Pa., succeeding C. GERMAN GROSE who resigned to become superintendent at Mt. Lebanon, Pittsburgh.

FERN E. STREEBIN recently took office as superintendent of schools, Ottawa County, Kan.

CARL HAYES GRIFFEY has assumed the duties of his new position as superintendent of schools, Lancaster, Ohio.

LOREY CLIFFORD DAY, for the last five years superintendent of schools, Livermore Falls, Me., has been elected to a similar position in South Portland, Me.

DR. HERBERT W. LULL, who is retiring from the superintendency of the schools of Newport, R. I., after thirty-one years, has been elected superintendent emeritus and will serve the schools in an advisory capacity.

HEATH E. WHITE, formerly superintendent of schools, Fonda, N. Y., has been named to a similar position at Westport, Conn.

D. W. HORTON, superintendent of schools, Logansport, Ind., has been elected to the superintendency in Muncie, Ind.

WILFRED H. RINGER, for the last eleven years headmaster of the Gloucester High School, Gloucester, Mass., has been named headmaster of the Brookline High School, Brookline, Mass., succeeding ERNEST R. CAVERLY, who has been named superintendent of the Brookline schools.

THE REV. EDWARD J. GORMAN has been chosen to head the parochial schools in the Fall River diocese, Fall River, Mass. His appointment is effective in 1933.

CLAUDE A. WILLIAMS is the newly elected superintendent of schools, Slayton, Minn. MR. WILLIAMS has been superintendent of schools, Emery, S. D., for the last three years. He succeeds F. C. LEWIS.

W. H. RANDOLPH succeeds E. H. BOULTER as superintendent of schools, Tuscola, Tex. MR. BOULTER becomes head of the schools of De Leon, Tex.

AUDRA HADLEY has been named to succeed H. MILDRED PRATT as superintendent of schools, Sandy Creek, N. Y.

CHARLES F. KOHLMAYER is the newly elected superintendent of schools for La Grange County, Ind.

JULIAN G. HILLHOUSE, headmaster, Hoosac School, Hoosick Falls, N. Y., has resigned because of ill health.

RALPH N. KOCHER, principal, Vineland High School, Vineland, N. J., for the last five years has been named director of research in the schools of Rahway, N. J., succeeding ARTHUR I. PERRY who became superintendent on July 1.

An Attractive, Business-Like Desk Set for Modern Teaching



THOSE educators who seek attractiveness, flexibility, and efficiency in the classroom will approve this modern desk set by Heywood-Wakefield. It is an all wood desk set similar in design to the type which many pupils will use upon entering business careers; a desk that permits flexible seating arrangements and one which assures easy and thorough sweeping and cleaning of the classroom.

It is strong, rigid, and comfortable. The posture type of chair has a properly curved and pitched back and a deep, supporting saddle type seat. This furniture is available in a wide range of sizes, too. Consequently, it is comparatively simple to obtain a uniform, business-like appearance throughout the entire school building.

The Heywood-Wakefield Table Desk Set is built of sturdy stock; is well braced all around; and is entirely capable of withstanding the severe usage which schoolroom equipment is sure to receive. The specially designed bentwood braces add extra strength, yet are so placed that they do not interfere with the pupil's feet. Before selecting any classroom equipment, be sure to investigate this and other practical styles of Heywood-Wakefield School Furniture. A note to the nearest sales office listed below will bring you complete information.

SALES OFFICES

Baltimore, Md.
Boston, Mass.
Buffalo, N. Y.
Chicago, Ill.
Columbus, Ohio
Dallas, Texas
Houston, Texas
Los Angeles, Calif.
Minneapolis, Minn.

New Orleans, La.
New York, N. Y.
Oklahoma City, Okla.
Philadelphia, Pa.
Pittsburgh, Pa.
Portland, Oregon
San Antonio, Texas
San Francisco, Calif.
Seattle, Wash.

HEYWOOD- WAKEFIELD

In the Educational Field

BERNARD B. CHAMBERS has assumed the office of superintendent of schools, Raleigh County, W. Va., succeeding CHARLES S. MCKINNEY.

HERBERT D. FILLERS has entered upon the duties of his new position as president of the junior college and superintendent of schools, Wichita Falls, Tex. MR. FILLERS was for ten years superintendent in Corsicana, Tex.

G. E. BROWN, superintendent of schools, Bisbee, Ariz., has resigned to spend the coming year in study.

J. A. DIFFIN, principal of the high school at Bisbee, Ariz., is the new superintendent of schools at Superior, Ariz.

JAMES DILEY is the newly elected superintendent of schools, Waverly, Ohio, succeeding J. E. WAY, who resigned to become superintendent of schools, Pike County, Ohio.

FRANK E. ALLEN, superintendent of schools, Muncie, Ind., has been elected to head the schools of South Bend, Ind., succeeding W. W. BORDEN, resigned.

C. W. WESTLEY, superintendent of schools, Moorfield, Neb., is the new superintendent at Hayes Center, Neb.

WILLIAM F. GEIGER, superintendent of schools, Tacoma, Wash., has resigned to become a professor of education in Dartmouth College.

J. A. SMITH is the newly elected superintendent of schools, Lyman, Wyo., succeeding R. W. MILES.

NATT B. BURBANK is the newly elected superintendent of schools, Morrisville, Vt.

DR. JOHN G. MITCHELL, president, State Teachers College, Edmond, Okla., has been appointed superintendent of schools, Seminole, Okla.

DR. J. C. DEWEY, formerly superintendent of schools, Galesville, Wis., has been appointed head of the department of education, Lindenwood College, St. Charles, Mo.

HARRY E. ZUBER, superintendent of schools, Nelsonville, Ohio, has resigned to become superintendent at Chagrin Falls, Ohio.

MARK R. LEFLER, superintendent of schools, Westport, Conn., has resigned.

G. E. ROUDEBUSH is the newly elected superintendent of schools, Youngstown, Ohio, succeeding DR. J. J. RICHESON, resigned.

JOHN T. NICHOLSON, a district superintendent of schools in New York City for the last sixteen years, died recently. He had been on the staff of the public school system for more than forty-three years.

GLEN R. OTIS has taken up the duties of his new position as superintendent of schools, Harmony, Minn.

S. J. HANSEN is the new superintendent of schools, Benson, Minn.

FREDERIC B. VAN ORNUM, for four years superintendent of schools, Marion, Mass., has resigned.

E. S. KERR, assistant superintendent of schools, Canton, Ohio, is the newly appointed superintendent at Salem, Ohio. He will succeed JOHN S. ALAN, who died recently.

J. D. MCKINLEY, superintendent of schools, McArthur, Ohio, has been named to head the schools of Vinton County, Ohio.

F. W. JOHANSEN has been appointed to head the schools of Clarinda, Iowa, succeeding E. C. DUNCAN.

J. M. RANKIN is the newly elected superintendent of schools, Ralls, Tex., succeeding A. B. SANDEAR.

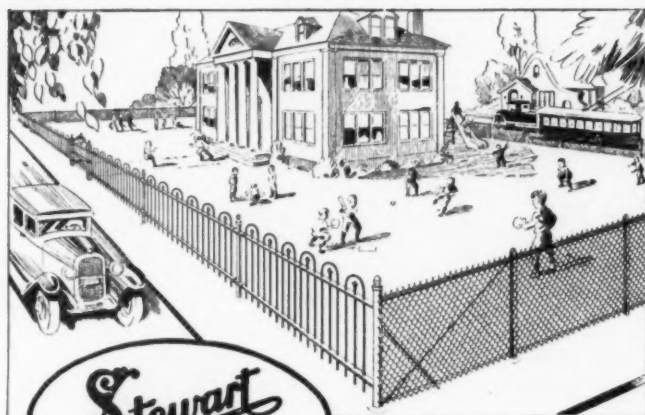
J. C. COCHRAN is the successor to B. W. HARTLEY as superintendent of schools, San Antonio, Tex. MR. COCHRAN was formerly superintendent at Mexia, Tex.

C. M. BARDEN, superintendent of schools, Thurston, Ohio, has resigned to head the schools of La Rue, Ohio. He will be succeeded by BRYAN REDD.

DR. RUDOLPH D. LINDQUIST, assistant superintendent of schools, Oakland, Calif., has resigned to accept the position of director of university schools and professor of education, Ohio State University.

C. L. BOYLE, superintendent of schools, Oronville, Calif., has resigned.

H. V. ROBINSON, superintendent of schools, Jewett, Tex., has resigned to become the dean of men and head of the mathematics department, Lon Morris College, Jacksonville, Tex.



Stewart
FENCES

Where Your Requirements Are "Years of Hard Service," Install STEWART FENCE

Strength, sturdiness, durability! These three words in Fence language mean **LONG LIFE!** And long life, in terms of money, spells **LOWEST COST!**

Stewart Fence is long-life Fence. It stands up under the assaults of children, of the elements and of time. Low initial cost; low upkeep.

We are low-cost producers of both Wrought Iron and Chain Link Wire Fence. We will give you the greatest values for your money, the natural result of 45 years' leadership in the industry.

ALWAYS get an estimate from Stewart, no matter how important or insignificant the job may appear to you. It will be to your advantage. Would you like to have a copy of our catalog, "Fences for Schools and Playgrounds?"

THE STEWART IRON WORKS CO., Inc.
716 Stewart Block Estab. 1886 Cincinnati, O.

ICE CREAM FROM THESE



WHITE DEPTHS!

What school child won't be wanting ice cream at every lunch from now till next strawberry-time! Here's the most sanitary white tank it is possible to make—for brick ice cream, for bulk ice cream. Its inside is enameled white—with the cover enameled white inside and outside. It is triple-coated with Vollrath porcelain enamel fused onto steel. So non-porous that it can't absorb any kind of odors—and can be washed like a huge china dish. It's lasting. Other Vollrath equipment is equally enduring. Let us send catalog and prices. The Vollrath Co., Sheboygan, Wisconsin. Established 1874.



The Vollrath name in this form on the label assures you of genuine Vollrath Ware.

VOLLRATH WARE

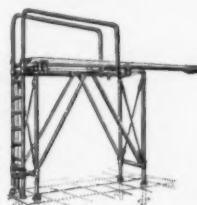
Is Your Swimming Pool Up to Date?

In the modern school, the swimming pool is just as important as the athletic field or playground. Has your school a pool? Does it need new equipment—or replacement of old? Let Hill-Standard 31 years the leader help you with your problem.



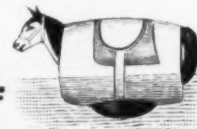
Send for Catalog No. 7

A beautiful book in colors illustrating and describing our International Regulation High and Low Springboards, Water Slides, Diving Towers, Life Guard Chairs, Pool Cleaning Equipment, Pool Ladders, Landing Stairs, Safety Cocoa Matting—over 100 items—many new. "When you buy with confidence you have thought of Hill-Standard."

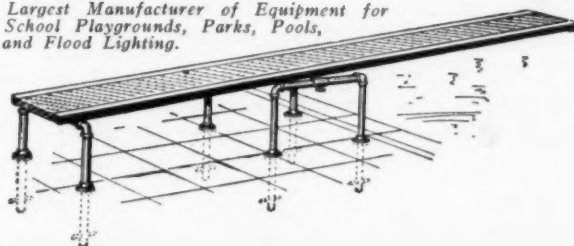


Address Division "NS"

HILL-STANDARD CO.
ESTABLISHED 1900
ANDERSON INDIANA, U.S.A.



Largest Manufacturer of Equipment for
School Playgrounds, Parks, Pools,
and Flood Lighting.



If Interested in Locker Padlocks

Wait!

FOR 42 years we have made keyless locks—millions in use are now giving satisfactory service in schools, colleges, academies and gyms all over the country.

But We Have a New One

soon to be offered to the educational institution. It embodies all former advantages plus features found in no other lock on the market. It is positively **THE LAST WORD** in a school lock.

Watch for Announcement of Details in
This and Other Leading Educational
Publications

(If your needs are urgent, however, use the coupon below for further information)

The J. B. Miller Keyless Lock Co.
207 Lock St. (Dept. A) Kent, Ohio

THE J. B. MILLER KEYLESS LOCK CO.
207 LOCK ST. (DEPT. A), KENT, OHIO

Gentlemen:

We are interested in learning more about your new keyless lock and service for educational institutions.

Name of School or College.....

Name of Individual.....

Address.....City and State.....

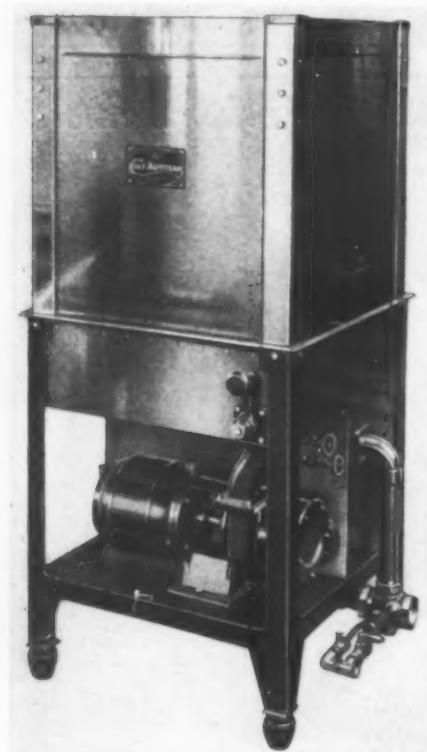
Your School— Its Construction and Equipment

A Department Conducted by CHESTER HART, B. Arch., Chicago

Kitchen Equipment That Is Simple and Serviceable

When the architect is designing the school kitchen he makes every effort to use materials that give the appearance of light and cleanliness. Great care is taken to provide flat wall surfaces, to minimize ledges and to eliminate moldings whenever possible. Simple surfaces collect less dust and dirt and are easy to clean. Two kitchen equipment companies seem to have incorporated in new models of their machines something of this simplicity of surface, as well as of operation.

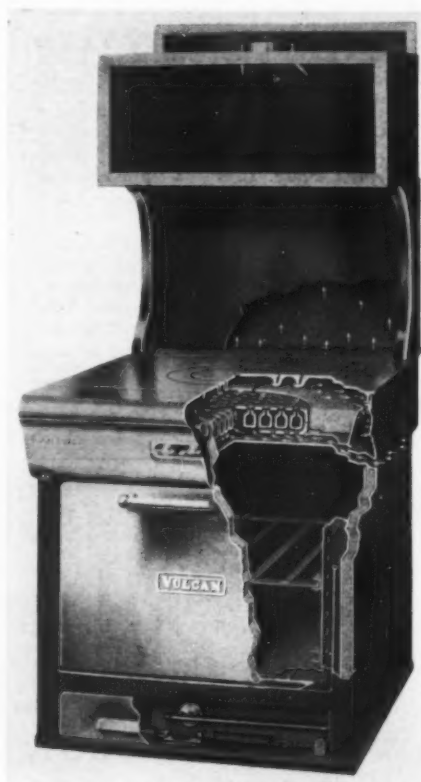
The Vulcan heavy duty ranges and ovens of the Standard Gas Equipment Corporation, 18 East Forty-First Street, New York City, have been



This dishwasher has the motor and pump mounted on a single pedestal base that is fastened to a low shelf.

completely redesigned. The Vulcan range has all door springs, hinges, manifolds and flue pipes enclosed, as well as projections that are unnecessary to the actual operation of the stove. Gas cocks,

door handles and temperature regulators are the only parts that break the flat surfaces. All Vulcan ovens and cookers are being redesigned in this style. This concealment does not mean inaccessi-



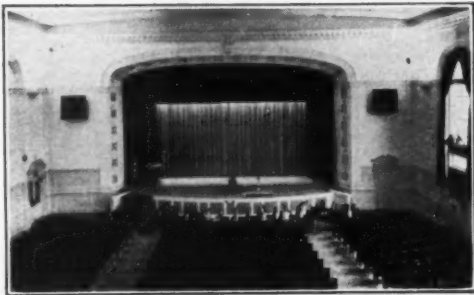
This cross section of the new range shows the burner and top construction, insulation and concealed manifold and flue.

bility, because the design permits the removal of all parts without special tools. These ranges have a simplicity of surface that gives the impression of efficiency, speed and sanitation.

A new burner construction has been developed to permit the use of the entire enlarged heating surface in all-hot-top ranges. The top itself has been made heavier, and is reinforced to allow for the greater weight that may be placed upon it.

In heating, as well as in refrigeration, losses through the transfer of heat have been prevented by the use of insulating materials. The economic value of insulation has been acknowledged in these fields, and it has now been recognized in oven construction. The Vulcan ovens, including the doors, have been insulated with rock wool that is held be-

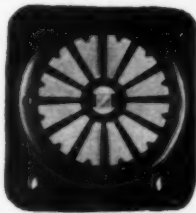
WRIGHT-DECOSTER REPRODUCERS



The large auditorium of the Upper Darby Junior High School is equipped with two No. 4 Baffles with No. 207 Wright-De Coster Chassis.

WRIGHT-DE COSTER REPRODUCERS are being used more and more every day in school sound installations.

Write us, telling the type of sound reproducing system you contemplate installing, and we can, most likely, refer you to a similar installation using WRIGHT-DE COSTER REPRODUCERS.



WRIGHT-DE COSTER HYFLUX SPEAKER. Wall Type, used extensively in School installations.

WRIGHT-DECOSTER, INC.

2247 University Ave. St. Paul, Minn.

Export Dept., M. Simons & Son Co.,
25 Warren St., New York.
Cable address: Simontrice, New York.

There are more DUDLEY LOCKS in American Schools than any other make



S-2B

Such leadership is the truest index of definite superiority and real merit over a period of years.

Dudley Locks also lead in the newest and latest inventions. The self-locking device was pioneered by Dudley, as well as other improvements which have produced the strongest, surest, "easiest-to-operate" lock of all.

If you have a locker problem, write for information to the world's largest manufacturer of combination locks.

Sample Lock Sent for Free Examination

DUDLEY LOCK CORPORATION
Dept. A-88

26 North Franklin Chicago



SL-2

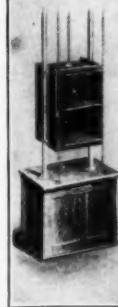
DUDLEY LOCKS

A Slip . . . A FALL! Another Accident

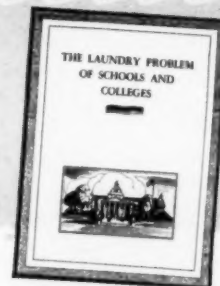
MANY accidents occur on the staircase, especially when carrying loads of books or food supplies between floors. It is modern practice to use Dumb Waiters in schools for vertical transportation. Sedgwick Dumb Waiters are ideal for school use because they are so free from mechanical troubles, so strongly constructed, so safe in operation. The cost of a Sedgwick is justified by its extra quality. To pay less is to accept less in service rendered.

Write for new illustrated catalog and consult our School Service Department for specific needs. Address Sedgwick Machine Works, 165 West 15th Street, New York

SEDGWICK
DumbWaiter
Machines
are
Guaranteed
for
Five Years



SEDGWICK
Dumb Waiters - Elevators
FOR SCHOOLS



WRITE—For Your Copy of This Valuable Report

The number of school authorities who have requested copies of the report "THE LAUNDRY PROBLEM OF THE SCHOOL AND COLLEGE"—leads us to suggest that you, too, secure a copy of this interesting and unbiased study on whether or not it is profitable to own and operate a school laundry.

Written by a leading consulting engineer, the factors of physical and service facilities, architect and school administrative decisions, collection, distribution, etc., are considered in this report. Request a copy.

TROY LAUNDRY MACHINERY CO., INC.

Chicago - New York City - San Francisco - Seattle - Boston - Los Angeles
Factories: East Moline, Ill., U. S. A.
J. ARMSTRONG & CO., Ltd., European Agents; London, Berlin, Zurich.

TROY LAUNDRY MACHINERY

Since 1879—The World's Pioneer Manufacturer of Laundry Machinery

tween the double steel walls. This insulation reduces heat losses with a consequent lowered fuel cost, and assures greater comfort for the cooks before the stove and in the kitchen generally.

Another piece of kitchen equipment that has been designed to facilitate cleaning and operation is the new small size Model "R-1" Colt Autosan dishwasher, made by the Colt Patent Fire Arms Manufacturing Co., Hartford, Conn. The simple, flat surfaces are unbroken by any kind of projection on the top or sides of the machine, except by a single valve control for washing and rinsing, and a supply pipe in the lower portion. The motor and pump are mounted on a single pedestal base that is fastened to a low shelf. This gives a mechanical and sanitary advantage because the pump and motor cannot get out of alignment, and the shelf may be easily cleaned. The single control for washing and rinsing automatically closes the valve before changing from one operation to the other. There is no danger of the two operations being performed at the same time with a consequent waste of solutions. The machine is provided with adjustable legs for leveling on uneven floors. Other than these changes, this Colt Autosan model is similar to the larger models except in its small size (27 in. by 27 in.). It is estimated that this machine, in cafeteria service, will handle the dishes for a maximum of 500 persons.

The simplicity of line and surface that has been achieved in this kitchen equipment follows the keynote of modern design in architecture and machinery, since simplified operation is the goal toward which industry is pointed.

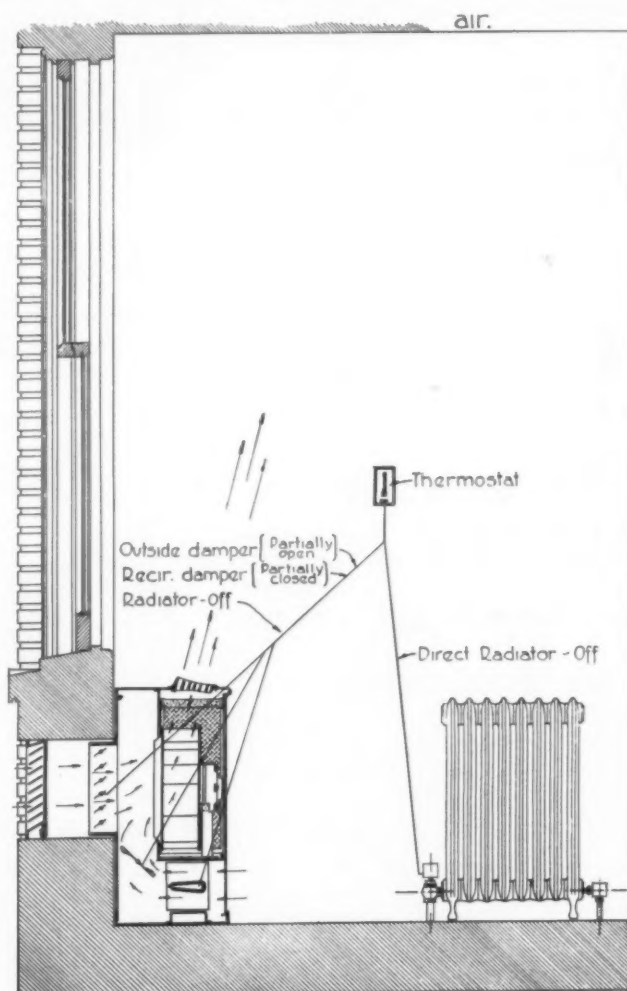
New Unit Ventilators and What They Mean to the School

Two new types of unit ventilators have been developed.

The construction of the two machines is such that the theory of air motion, as applied to recirculated air, may be used. It is now believed that recirculated air kept in motion is just as healthful as all outdoor air. Outdoor air is needed only to dissipate odors and for purposes of cooling. A combination of part outdoor and part recirculated air would satisfy these requirements of ventilation. To achieve this partial recirculation, a new type of damper adjustment is used. It is a damper control that allows a mixture of recirculated air with outdoor air, as well as completely recirculated air or entirely outdoor air. The method of attaining and applying this partial recirculation is entirely different in these two units.

The Her-Nel-Co unit begins operation by entirely recirculating the air in order to heat it rapidly. As the room becomes warmer outdoor air is added, until finally only outdoor air is used. This is the complete ventilation cycle for the day. This cycle is automatic when pneumatic or electric thermostatic control is used. When hand control is used, the kind of heat and ventilation is governed by the individual in charge of the room.

The Sturtevant unit delivers a constant quantity of outdoor air that never exceeds 50 per cent, mixed with recirculated air. This unit may be adjusted to give all outdoor or all recirculated air, regardless of the adjustment of the recirculating damper. The Sturtevant machine has a hand control in addition to pneumatic or electric regulation. A unique



Section through Her-Nel-Co unit ventilator showing fan and fresh air inlet and damper, recirculating damper, heating element and recirculating grill and diagrammatic hook-up of ventilator and radiator with thermostat.

type of control that may be supplied with this unit is an automatic temperature regulating device within the machine. This type of regulator eliminates the piping, wiring and equipment necessary to pneumatic or electric control, and results in a considerable saving in installation costs. Where

ONE all-purpose type of desk adaptable for various classrooms



THE American all-purpose Universal Desk . . . the new-day product of the American Seating Company.

As the illustrations show, this type of desk is available as a type-writer desk—as a level top model for group study—or with book support for sight conservation—for study hall purposes—as a comfortable seat and desk for crippled children—as well as a standard model for all 'round school use.

Posture features have been incorporated that make it natural and comfortable for the child to sit erect . . . features that protect the physical and mental welfare of the children in your care. The detailed facts about this outstanding type of desk are available. The same general design of this desk is also obtainable in other types of classroom seating. Write for detailed facts. Address Dept. NS8.



American Seating Company



Makers of Fine Seating for Schools, Churches and Public Auditoriums.

GENERAL OFFICES: GRAND RAPIDS, MICH.

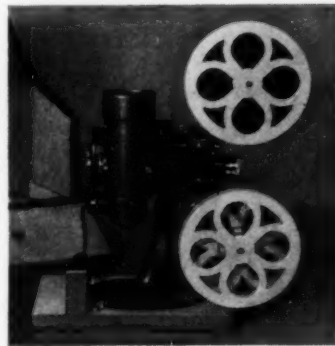
Branches in All Principal Cities.

"Progressive Schools Need Modern Tools"

FILMO

SCHOOL PROJECTOR

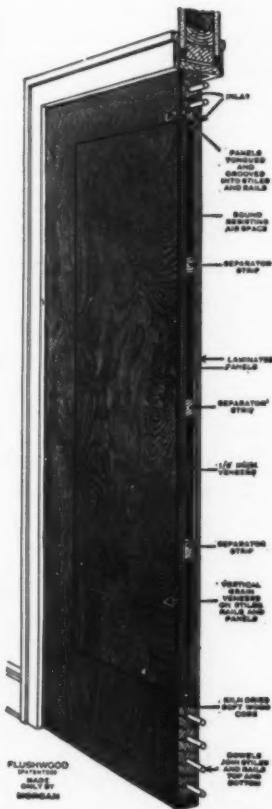
Too often, today's economy is tomorrow's waste. Not so with the Filmo School Projector. Designed and built by the world's leading cinema engineers with an eye to thousands of "tomorrows", the Filmo School Projector remains basically unchanged from its original design. It was right in the first place, and it will remain right, because of the fundamentals of its design and manufacture. Set up in a moment, quickly threaded, it runs itself—a marvel of easy operation and efficiency. May be had equipped for movies in full color, and for theater-quality sound movies with the



famous B & H Filmophone. 375-watt or 250-watt illumination. Write for new booklet—"Filmo Movies in Visual Education." Bell & Howell Company, 1815 Larchmont Ave., Chicago, Illinois. New York, Hollywood, London (B & H Co., Ltd.) Established 1907.

BELL & HOWELL

Filmo



FLUSHWOOD

(PATENTED)

The Door Choice of Experienced School Architects and Builders

IN THE up-to-date school the door has come to be recognized as a vital part of construction. Gone are the days when architects and builders were content with mediocrity in doors. Now they demand excellence in door construction as well as in all other materials they use. The doors must reflect the advance in methods shown in all else.

That's why Flushwood is filling a popular demand and growing in use every day. Flushwood equipment is really a necessity for the successful modern school.

Write our nearest office for complete descriptive literature.

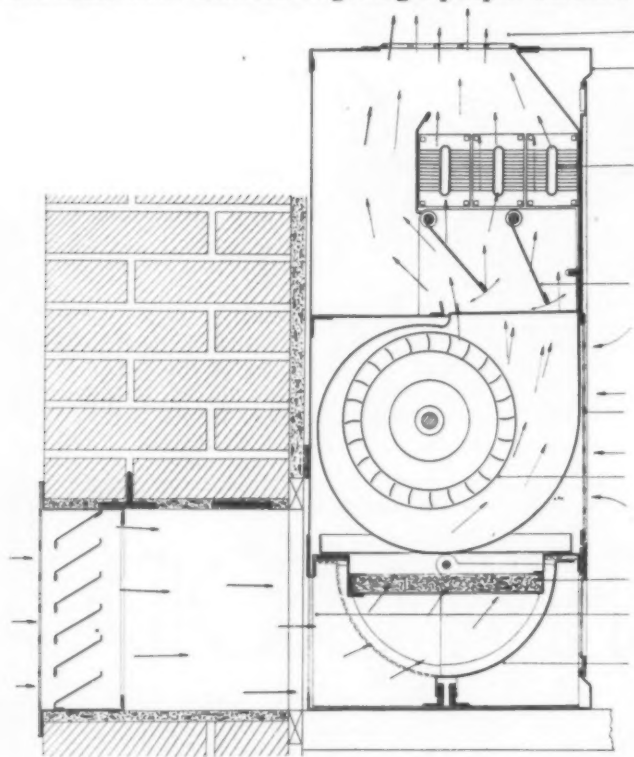
MORGAN WOODWORK ORGANIZATION

MORGAN COMPANY		MORGAN SASH AND DOOR COMPANY	
Oshkosh, Wis.	New York City	Chicago	
MORGAN MILLWORK CO.			
Baltimore	Jersey City	Greensboro	New Haven
			Wilmington

auxiliary radiation is desired it would have to be hand controlled to obtain this saving.

As may be readily seen, this partial recirculation will effect a reduced operating cost. When outdoor air is used only for cooling, or when a maximum of 50 per cent only is warmed, the amount of heat necessary is appreciably less than is required in raising 100 per cent outdoor air to room temperature. In some cases, particularly in large schools, this decreased radiation may reduce the size of the boilers and steam mains needed.

It has been found that too many vent flues actually interfere with the heating and ventilation of the classroom. Instead of giving a proper distribu-



Section through the Sturtevant unit ventilator showing three heating elements at top, two by-pass dampers, fan and motor with recirculating grill and fresh air inlet and damper.

tion and diffusion of air, the flues tended to form air lanes and to exhaust too much air from the room. With the use of the partial recirculation system there has been a general tendency on the part of manufacturers of unit ventilators to advocate the elimination of all vent flues in classrooms. In this way an even diffusion of air is claimed to take place, and the air pressure within the room forces any excess air into the corridors, from which it escapes to the outdoors. Working on this theory, the architects might shorten classroom doors, allowing a slight opening at the threshold, or place louvers in the bottom rail of the door to provide a larger avenue of escape.

The size of unit ventilators is a factor in planning and designing because the height of the ma-

chine, which governs the height of window stools (the inside window "sills") has necessitated a high stool. When ventilators are recessed partially within the wall this distance between the stool and the floor becomes even greater because the structural support necessary for the window frame is added to the height of the stool. These two ventilators have been reduced in height five to seven inches, a change that has several advantages. This change allows adequate lighting to be acquired with greater facility, because a greater latitude in the size of window openings is possible. There is a slightly greater flexibility in the arrangement of windows and piers that allows a nicer adjustment of their proportions. Interior as well as exterior appearance is affected since the room that has low window stools will seem larger and less enclosed and working conditions will be pleasanter.

An indication of the research that has been done and the changes that have been made in unit ventilation has been given here. Further information on heating and ventilating problems, and a complete description of the two units here mentioned are contained in the booklets of the Herman Nelson Corporation, Moline, Ill., and the B. F. Sturtevant Company, Hyde Park, Boston.

Automatic Speed Control for "Talkie" Motion Pictures

The portable sound motion picture machine is going through a development that is comparable to that of the silent motion picture projectors and the radio. As a result of the experiments in these two fields, the portable "talkie" has had a firm foundation upon which to build, and one of the chief endeavors has been to simplify the operation of the machine. Portable picture projectors are becoming less intricate and more nearly automatic.

Two new features in the Animatophone Projector, made by the Victor Animatograph Corporation, Davenport, Iowa, are designed for the automatic determination and control of speed. That the operating speed for either phonograph records (33 $\frac{1}{3}$ R.P.M.) or "talkie" records (78 R.P.M.) has been obtained is indicated by the size of a line of light thrown on a small prism. The correct speed is determined when the machine is first set up, and needs to be changed only if the type of record is changed.

An entirely automatic speed governor has been provided. It maintains a uniformity of speed regardless of the fluctuations in line current.

Changes in the construction and materials of the projector and speaker have brought the total weight of the equipment to below seventy pounds.